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ABSTRACT

This report presents findings from a national research and reporting program dealing with drug use and related attitudes of high school seniors. The major topics focus on the current prevalence of drug use among students and trends in drug use since 1975. Also reported are data on the school for first usage, trends in use at earlier grade levels, the intensity of drug use, attitudes among seniors about drug use, and their perceptions of certain aspects of the social environment. Statistics are presented for 11 separate classes of drugs. Findings related to alcohol and smoking are also included, with a particular emphasis on the higher frequency levels of drug use. (JAC)

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Highlights From

STUDENT DRUG USE IN AMERICA 1975-1981

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INTRODUCTION

This report presents findings from a national research and reporting program being conducted by The University of Michigan's Institute for Social Research. That program, entitled Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth, is funded primarily through research grants from the National Institute on Drug Abuse.

The present document is the fifth in an annual series reporting the drug use and related attitudes of high school seniors in the United States. This report covers the high school classes of 1975 through 1981, and supercedes the previous reports.

The larger volume, from which this document presents only the highlights of findings, is to be published in limited quantity by the National Institute on Drug Abuse in 1982 under the title Student Drug Use in America: 1975-1981. That larger volume is the third in a series of considerably more detailed reports, the last being Drugs and the Class of '78: Behaviors, Attitudes, and Recent National Trends.* In addition to presenting a full chapter of detailed findings for each of the various classes of drugs, the larger volume contains chapters on attitudes and beliefs about drugs and various relevant aspects of the social milieu, as well as several appendices dealing with validity, sampling error estimation, and survey instrumentation.

Content Covered in this Report

Two of the major topics to be treated here are the current prevalence of drug use among American high school seniors, and trends in use since 1975. Also reported are data on grade of first use, trends in use at earlier grade levels, intensity of drug use, attitudes and beliefs among seniors concerning various types of drug use, and their perceptions of certain relevant aspects of the social environment.

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*Those interested in obtaining a copy free of charge may write to the National Clearinghouse for Drug Abuse Information, National Institute on Drug Abuse, 5600 Fishers Lane, Rockville, Maryland 20857.

The eleven separate classes of drugs distinguished are marijuana (including hashish), inhalants, hallucinogens, cocaine, heroin, natural and synthetic opiates other than heroin, stimulants, sedatives, tranquilizers, alcohol, and cigarettes. (This particular organization of drug use classes was chosen to heighten comparability with a parallel publication based on a national household survey on drug abuse.) Separate statistics are also presented here for several sub-classes of drugs: PCP and LSD (both hallucinogens), barbiturates and methaqualone (both sedatives) and the amyl and butyl nitrites (both inhalants). PCP and the nitrites were added to our measurement for the first time in 1979 because of increasing concern over their rising popularity and possibly deleterious effects; trend data are thus only available for them since 1979. Barbiturates and methaqualone, which in combination constitute the two components of the "sedatives" class as used here, have been separately measured from the outset. They are presented separately because their trend lines are substantially different.

Except for the findings on alcohol and cigarettes, practically all of the information reported here deals with illicit drug use.* Respondents are asked to exclude any occasions on which they used any of the psychotherapeutic drugs under medical supervision. (Some data on the medically supervised use of such drugs are contained in the full 1977, 1978, and 1982 volumes.)

We have chosen to focus considerable attention on drug use at the higher frequency levels rather than simply reporting proportions who have ever used various drugs. This is done to help differentiate levels of seriousness, or extent, of drug involvement. While we may yet lack any public consensus of what levels of use constitute "abuse," there is surely a consensus that heavier levels of use are more likely to have detrimental effects for the user and society than are lighter levels. We have also introduced indirect measures of dosage per occasion, by asking respondents the duration and intensity of the highs they usually experience with each type of drug.

Since the monitoring of trends in licit and illicit substance use is but one of the many objectives of this research program, a brief synopsis of other drug-related research findings which have emerged from the study during the year is included at the end of this report.

Purposes and Rationale for this Research

Perhaps no area is more clearly appropriate for the application of systematic research and reporting than the drug field, given its rapid rate of change, its importance for the well-being of the nation, and the amount of legislative and administrative intervention addressed to it. Young people are often at the leading edge of social change; and this has been particularly true in the case of drug use. The surge in illicit

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*Actually, purchase and use of the butyl nitrites remains legal and unregulated at the present time.

drug use during the last decade has proven to be primarily a youth phenomenon, with onset of use most likely to occur during adolescence. From one year to the next particular drugs rise or fall in popularity, and related problems occur for youth, for their families, for governmental agencies, and for society as a whole. This year's findings show that considerable change is continuing to take place.

One of the major purposes of the Monitoring the Future series is to develop an accurate picture of the current situation and of current trends. A reasonably accurate assessment of the basic size and contours of the problem of illicit drug use among young Americans is an important starting place for rational public debate and policymaking. In the absence of reliable prevalence data, substantial misconceptions can develop and resources can be misallocated. In the absence of reliable data on trends, early detection and localization of emerging problems are more difficult, and assessments of the impact of major historical and policy-induced events are much more conjectural.

The Monitoring the Future study has a number of purposes other than prevalence and trend estimation—purposes which are not addressed in any detail in this volume. Among them are: gaining a better understanding of the lifestyles and value orientations associated with various patterns of drug use, and monitoring how those orientations are shifting over time; determining the immediate and more general aspects of the social environment which are associated with drug use and abuse; determining how drug use is affected by major transitions in social environment (such as entry into military service, civilian employment, college, unemployment) or in social roles (marriage, parenthood); distinguishing age effects from cohort and period effects in determining drug use; determining the effects of social legislation on all types of drug use; and determining the changing connotations of drug use and changing patterns of multiple drug use among youth. Readers interested in publications dealing with any of these other areas should write the authors at the Institute for Social Research, Rm. 2030, The University of Michigan, Ann Arbor, Michigan, 48109.

Research Design and Procedures

The basic research design involves data collections from high school seniors during the spring of each year, beginning with the class of 1975. Each data collection takes place in approximately 125 to 130 public and private high schools selected to provide an accurate cross section of high school seniors throughout the United States.

Reasons for Focusing on High School Seniors. There are several reasons for choosing the senior year of high school as an optimal point for monitoring the drug use and related attitudes of youth. First, the completion of high school represents the end of an important developmental stage in this society, since it demarcates both the end of universal public education and, for many, the end of living in the parental home. Therefore, it is a logical point at which to take stock of

the cumulated influences of these two environments on American youth. Further, the completion of high school represents the jumping-off point from which young people diverge into widely differing social environments and experiences. Finally, there are some important practical advantages to building a system of data collections around samples of high school seniors. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that corsiderable stress be laid on efficiency as well as feasibility. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied economically.

One limitation in the design is that it does not include in the target population those young men and women who drop out of high school before graduation—between 15 and 20 percent of each age cohort. The omission of high school dropouts does introduce biases in the estimation of certain characteristics of the entire age group; however, for most purposes, the small proportion of dropouts sets outer limits on the bias. Further, since the bias from missing dropouts should remain just about constant from year to year, their omission should introduce little or no bias into the various types of change being estimated for the majority of the population.* Indeed, we believe the changes observed over time for those who finish high school are likely to parallel the changes for dropouts in most instances.

Sampling Procedures. A multi-stage procedure is used for securing a nationwide sample of high school seniors. Stage 1 is the selection of particular geographic areas, Stage 2 is the selection of one or more high schools in each area, and Stage 3 is the selection of seniors within each high school.

This three-stage sampling procedure yielded the following numbers of participating schools and students:

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981
Number of public schools	111	108	108	111	111	107	109
Number of private schools	14	15	16	20	20	20	19
Total number of schools	125	123	124	131	131	127	128
Total number of students	15,791	16,678	18,436	18,924	16,662	16,524	18,267
Student response rate	78%	77%	79%	83%	82%	82%	81%

*An examination of U. S. Census data shows that the proportion of all American 16 to 24 year olds who are not high school graduates, nor actively enrolled in school, remained virtually constant (at about 15%) between 1970 and 1980. (Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students," Series P-20, various years).

Questionnaire Administration. About ten days before the administration students are given flyers explaining the study. The actual questionnaire administrations are conducted by the local Institute for Social Research representatives and their assistants, following standardized procedures detailed in a project instruction manual. The questionnaires are administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations.

Questionnaire Format. Because many questions are needed to cover all of the topic areas in the study, much of the questionnaire content is divided into five different questionnaire forms (which are distributed to participants in an ordered sequence that insures five virtually identical subsamples). About one-third of each questionnaire form consists of key or "core" variables which are common to all forms. All demographic variables, and nearly all of the drug use variables included in this report, are included in this "core" set of measures. Many of the questions dealing with attitudes, beliefs, and perceptions of relevant features of the social milieu are contained in only a single form, however, and are thus based on one-fifth as many cases (i.e., approximately 3,500 respondents).

Representativeness and Validity

School Participation. Schools are invited to participate in the study for a two-year period, and with only very few exceptions, each school in the original sample, after participating for one year of the study, has agreed to participate for a second year. Depending on the year, from 66% to 80% of the half-sample of schools being invited to participate in the study for the first time agree to do so; for each school refusal, a similar school (in terms of size, geographic area, urbanicity, etc.) is recruited as a replacement. The selection of replacement schools almost entirely removes problems of bias in region, urbanicity, and the like that might result from certain schools refusing to participate. Other potential biases are more subtle, however. If, for example, it turned out that most schools with "drug problems" refused to participate, that would seriously bias the sample. And if any other single factor were dominant in most refusals, that also might suggest a source of serious bias. In fact, however, the reasons for a school refusing to participate are varied and are often a function of happenstance events; only a small proportion specifically object to the drug content of the survey. Thus we feel fairly confident that school refusals have not seriously biased the surveys.

Schools are selected in such a way that half of each year's sample is comprised of schools which participated the previous year, and half is comprised of schools which will participate the following year. We make use of this staggered half-sample feature of the design to check on possible biases in the year-to-year trend estimates derived from the full samples. Specifically, separate sets of one-year trends are computed using first that half sample of schools which participated in

both 1975 and 1976, then the half-sample which participated in both 1976 and 1977, and so on. Thus, each one-year trend estimate derived in this way is based on a set of about 65 schools. When the resulting trend data (examined separately for each class of drugs) are compared with trends based on the total sample of schools, the results are highly similar, indicating that the trend estimates are little affected by turnover or shifting refusal rates in the school samples.

Student Participation. Completed questionnaires are obtained from 77% to 83% of all sampled students in participating schools each year. The single most important reason that students are missed is absence from class at the time of data collection; in most cases it is not workable to schedule a special follow-up data collection for absent students. Students with fairly high rates of absenteeism also report above-average rates of drug use; therefore, there is some degree of bias introduced into the prevalence estimates by our missing the absentees. Much of that bias could be corrected through the use of special weighting; however, we decided not to do so because the bias in overall drug use estimates was determined to be quite small, and because the necessary weighting procedures would have introduced undesirable complications (Appendix A of the full reports provides a discussion of this point). Of course, some students are not absent from class, but simply refuse when asked to complete a questionnaire. However, the proportion of explicit refusals amounts to only about 1 percent of the target sample.

Sampling Accuracy of the Estimates. For purposes of this introduction, it is sufficient to note that drug use estimates based on the total sample for 1981 have confidence intervals that average about ±1% (as shown in Table 1, confidence intervals vary from ±2.2% to smaller than ±0.2%, depending on the drug). This means that had we been able to invite all schools and all seniors in the 48 coterminous states to participate, the results from such a massive survey should be within about one percentage point of our present findings for most drugs at least 95 times out of 100. We consider this to be a high level of accuracy, and one that permits the detection of fairly small changes from one year to the next.

Consistency and the Measurement of Trends. One other point is worth noting in a discussion of the validity of our findings. The Monitoring the Future project is, by intention, a study designed to be sensitive to changes from one time to another. Accordingly, the measures and procedures have been standardized and applied consistently across each data collection. To the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same way from one year to the next. In other words, biases in the survey estimates will tend to be consistent from one year to another, which means that our measurement of trends should be affected very little by any such biases.

A Caution about the Stimulant Results

In reporting their psychotherapeutic drug use, respondents are instructed to exclude not only medically supervised use, but also any use of over-the-counter (i.e., non-prescription) drugs. However, we believe that some of those reporting stimulant (amphetamine) use in the last few years have erroneously included the use of over-the-counter stay-awake and diet pills, as well as other pills intentionally manufactured to look like amphetamines, and sold under names which sound like them, but which contain no controlled substances. (Legislative and enforcement efforts are now underway in a number of states to stop the manufacture and mail-order distribution of these latter "look-alike, sound-alike" pseudo-amphetamines.) The advertising and sales of over-the-counter diet pills (most of which contain the mild stimulant phenylpropanolamine, and some of which also contain caffeine) have burgeoned over the last two years, as has also been true for the "sound-alike, look-alike" pills (most of which contain caffeine). The inclusion of these non-controlled stimulants in the responses from recent surveys may account for some or all of the observed sharp rise in reported amphetamine use. Therefore, the reader is advised to view the recent amphetamine use statistics with some caution.*

An upward bias of the sort just described would affect not only the stimulant (amphetamine) trend statistics, but also trend statistics for the composite index entitled "use of any illicit drug other than marijuana." Since this index has been used consistently in this monograph series to compare important subgroups (such as those defined by sex, region, college plans, etc.) we now are including adjusted values based on calculations in which amphetamines have been excluded. In other words the adjusted statistic reflects "use of any illicit drugs other than marijuana or amphetamines." These adjusted values are included to show what would happen if amphetamine use—and any upward biases in trends it might contain—is excluded from the trend statistics.

It is worth noting that the two classes of drug use which are not actually amphetamine use, but which may be inadvertently reported as amphetamine use, reflect two quite different types of behavior. Presumably users of over-the-counter diet and stay-awake pills are using them for functional reasons and not for recreational purposes. On the other hand, it seems likely that most users of the look-alike pseudo-amphetamines are using them for recreational purposes. (In fact, in many cases the user who purchased them on the street may think he or she has the real thing.) Thus, the inclusion of the look-alikes may introduce a bias in the estimates of true amphetamine use, but not in the estimates of a class of behavior—namely, trying to use controlled stimulants for recreational purposes. Some would argue that the latter is the more important factor to be monitoring in any case.

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*A revised and expanded set of questions is being used in the forthcoming 1982 survey of seniors in an effort to separate out, insofar as possible, the use of these other drugs from the use of true amphetamines.

OVERVIEW OF KEY FINDINGS

Several important changes in drug use by American young people occurred between 1980 and 1981. Among them are some substantial declines in the use of certain drugs and a substantial increase in the use of another.

- One of the most important recent changes, from a public health standpoint, is the continuing decline in cigarette smoking by this age group. Since 1977, the proportion of seniors smoking a half-a-pack a day or more has dropped by nearly one-third—that is, from 19.4% in 1977 to 13.5% in 1981. (Smoking one or more cigarettes daily dropped from 29% to 20% over the same period.) While the decline may be slowing, it has certainly been substantial already. We are inclined to attribute this change to a long-term increase in young people's health concerns about smoking and to a shift in peer norms regarding the acceptability of this behavior.

  Regular smoking is now found in about equal proportions between males and females, but in very unequal proportions between the college-bound and the non-college-bound. Of those planning to complete four years of college, only 8% smoke half-a-pack a day, versus 21% for those not planning on college. Regular smoking in this age group also tends to be unusually low in the Western region of the country (7%).

- Another change which bodes well for the present and future health of American young people is a sharp drop in daily (or near daily) marijuana use—which we define as use on twenty or more occasions in the prior thirty days. At its peak in 1978, daily use stood at nearly 11% of all seniors, after almost doubling in the prior three years. Since 1978, the daily use statistic has dropped back, by about one-third, to 7% in 1981. This still means, of course, that one in every fourteen

seniors uses marijuana on a daily or near daily basis; nevertheless, that is a substantial improvement over one in every nine. As with cigarette smoking, this change appears attributable to a substantial and continuing increase in health concerns related to regular use of this drug, as well as to a decrease in perceived peer acceptance. The proportion of seniors attributing "great risk" to regular marijuana use has risen by 23% in the last three years (from 35% to 58%) and three-quarters of all seniors now think their close friends would disapprove such behavior.

- The proportion of students using marijuana at any level is also declining, though less dramatically than daily use. (Annual use is down from 51% in 1979 to 46% in 1981.) Further, users today do not report getting as high, or staying high as long, as did users a few years ago—suggesting some moderation in behavior, even among the users.

- PCP—which is certainly less widely used than marijuana, but still of great concern to health professionals—is another drug for which there is a significant and ongoing drop in use. In just two years, the annual usage statistics have dropped by more than one-half—from 7.0% in 1979 to 3.2% in 1981. Though we lack direct measures of students' health concerns regarding this drug, we are inclined to believe that it achieved a reputation as a particularly dangerous drug, which could well explain the sharp fall-off in use.

- The one other class of drugs showing a sharp decline at present is the amyl and butyl nitrites, inhalants which are known on the street by names like "poppers," "snappers," Locker Room, and Rush. Since 1979 the number of seniors using during the prior year dropped by almost half, from 6.5% in 1979 to 3.7% in 1981.

- In the case of tranquilizers a much more gradual decline, which began in 1978, continued into 1981. Across the last four years the annual usage statistic for non-medically-supervised tranquilizer use has fallen from 11% to 8%.

- Not all drugs showed a decline in use; three important ones, heroin, barbiturates, and LSD, remained quite steady this year, although this follows on an earlier period of decline for each of these drugs. (In the case of LSD, the degree and duration of the highs experienced by recent users did continue their earlier decline.)

- The use of opiates other than heroin remained steady this year, as it has since 1975, though the degree and duration of the highs experienced by users have both dropped over that period.

- Another drug which has remained fairly steady for the last two years, after a sharp rise in popularity, is cocaine. Between 1976 and 1979 the proportion of seniors using cocaine during the prior year doubled, from 6% to 12%. Since then, however, that statistic has increased by only four-tenths of one percent for the nation as a whole.* Cocaine users today indicate that they do not usually stay high as long as did seniors in earlier classes.

- Only amphetamines showed a statistically significant increase this year. However, amphetamine use is of considerable importance, since this is the most widely used class of illicit drugs other than marijuana. One-third of all 1981 seniors (32%) indicate having at least tried them without medical supervision, and one-sixth (16%) say they have used in the past month. All of these statistics show a continuing increase over the past three years, but a particularly sharp increase from 1980 to 1981. (For example, lifetime prevalence rose by 6% this year, annual prevalence by 5%, and monthly prevalence by 4%.)

  As is discussed elsewhere in this report (see pages 7, 37, 81, and 110), we think these sharp upward trends may be exaggerations of the true amphetamine use trends. In the past two years there has been a large increase in the sales of over-the-counter stimulants (diet pills and stay-awake pills) and of mail-order pseudo-amphetamines (which look like, and have names that sound like, real amphetamines); thus an increased number of users of these non-controlled substances may mistakenly report them under amphetamine use. Certainly, the increase in recreational use is not as large as the above trend figures might suggest, since we know that some of that increase is due to more people using diet aids (mostly females) or over-the-counter stay-awake pills. But some special analyses of related data (reported on the above-referenced pages) indicate that there has been a real increase in the

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*This finding obscures the fact, however, that cocaine use has continued to rise in two regions (the West and Northeast) while falling in the other two (the South and North Central). The result is some very large regional differences in the use of this drug.

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recreational use of stimulants in this age group as well, although we do not believe that all of these stimulants are actually amphetamines.

- The statistics (except monthly use), on use of the sedative-hypnotic, methaqualone, also continued an earlier rise this year, although it was more gradual than before. Lifetime prevalence now stands at 11% for seniors, up from 8% in 1978.

- All measures of alcohol use remained virtually unchanged, including daily use (which has consistently stayed at about 6% since 1975). Occasional binge drinking—that is, taking five or more drinks in a row at least once during the prior two-week interval—has also remained steady, at 41% of all seniors, since 1979.

- In sum, the use of many illicit drugs has declined, or is declining, significantly from the peak levels during the seventies. Further, the current users of most of these drugs appear to be taking them in somewhat smaller doses or quantities than was true of earlier users, since there has been some drop in the reported degree and duration of the "highs" usually experienced with them. (This is true in the case of marijuana, amphetamines, LSD, cocaine, methaqualone, barbiturates, and opiates other than heroin. It is not true for alcohol, tranquilizers, or hallucinogens other than LSD.)

- Despite these tangible improvements, it is still the case that illicit drug use is extremely prevalent among American young people of high school age. In the graduating class of 1981, two-thirds (66%) admitted to at least some illicit use of a drug, and we consider that a conservatively low estimate. While a third of these (23% of the total sample) have used only marijuana, and then maybe only a few times, two thirds of them (43% of the sample) have used some other illicit drug(s), usually in addition to marijuana. We judge these still to be very high levels both in absolute terms, and relative to other countries. In fact, they are still probably the highest levels of illicit drug use among young people to be found in any industrialized nation in the world. Thus, while some improvements are definitely beginning to emerge, the problems of drug use and abuse are still a very long way from being solved.

- NOTES: A summary of trends in use at earlier grade levels may be found in Figures J-1 to J-17, while a summary of recent trends in the perceived availability of various drugs may be found in Figure R. An overview of other recent findings from the study (published elsewhere) appears on the final pages of this report.

PREVALENCE OF DRUG USE

This section summarizes the levels of drug use reported by the class of 1981. Data are included for lifetime use, use during the past year, use during the past month, and daily use. There is also a comparison of key subgroups in the population (based on sex, college plans, region of the country, and population density or urbanicity).

Prevalence of Drug Use in 1981: All Seniors

Lifetime, Monthly, and Annual Prevalence

- Two-thirds of all seniors (66%) report illicit drug use at some time in their lives. However, a substantial proportion of them have used only marijuana (23% of the sample or 35% of all illicit users).

- About four in every ten seniors (43%) report using an illicit drug other than marijuana at some time.*

- Figure A gives a ranking of the various drug classes on the basis of their lifetime prevalence figures.

- Marijuana is by far the most widely used illicit drug with 60% reporting some use in their lifetime, 46% reporting some use in the past year, and 32% use in the past month.

- The most widely used class of other illicit drugs is stimulants (32% lifetime prevalence).** Next come inhalants (adjusted) at 17% and cocaine at 17%. These

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*Use of "other illicit drugs" includes any use of hallucinogens, cocaine, or heroin or any use of other opiates, stimulants, sedatives, or tranquilizers which is not under a doctor's orders.

**Only use which was not medically supervised is included in the figures cited in this chapter.

TABLE 1

Prevalence (Percent Ever Used) of Sixteen Types of Drugs: Observed Estimates and 95% Confidence Limits (1981)

(N = 17500)

	Lower limit	Observed estimate	Upper limit
Marijuana/Hashish	57.3	59.5	61.7
Inhalants	11.5	12.3	13.2
Inhalants Adjusted[a]	*16.4*	*17.4*	*18.4*
Amyl & Butyl Nitrites[b]	8.7	10.1	11.7
Hallucinogens	12.1	13.3	14.6
Hallucinogens Adjusted[c]	*14.5*	*15.7*	*17.0*
LSD[b]	8.8	9.8	10.9
PCP[b]	6.4	7.8	9.4
Cocaine	15.3	16.5	17.8
Heroin	0.9	1.1	1.4
Other opiates[d]	9.3	10.1	11.0
Stimulants[d]	30.6	32.2	33.9
Sedatives[d]	14.8	16.0	17.3
Barbiturates[d]	10.3	11.3	12.4
Methaqualone[d]	9.6	10.6	11.7
Tranquilizers[d]	13.5	14.7	16.0
Alcohol	91.4	92.[illegible]	93.6
Cigarettes	69.3	71.0	72.6

[a]Adjusted for underreporting of amyl and butyl nitrites. See text for details.

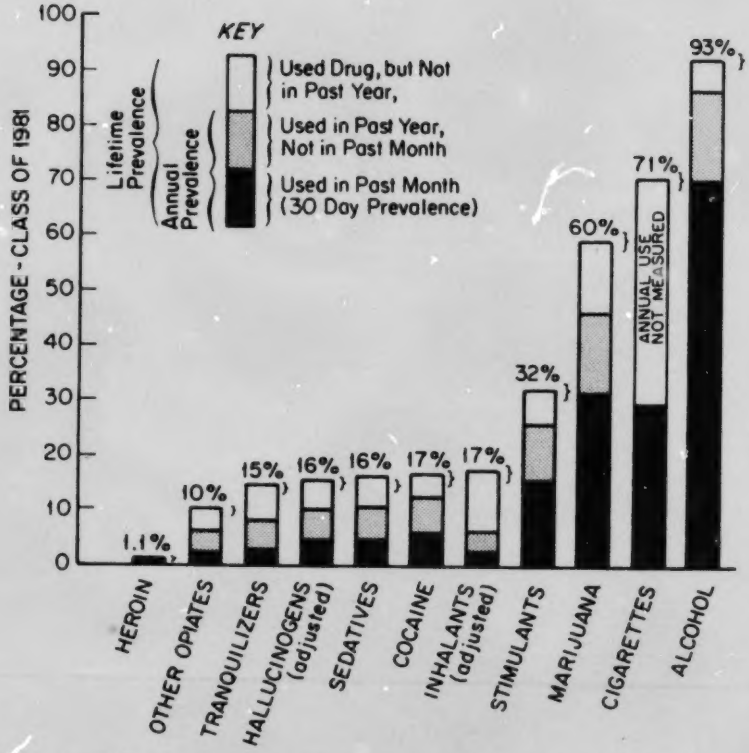
[b]Data based on a single questionnaire form. N is one-fifth of N indicated.

[c]Adjusted for underreporting of PCP. See text for details.

[d]Only drug use which was not under a doctor's orders is included here.

FIGURE A

Prevalence and Recency of Use
Eleven Types of Drugs, Class of 1981



NOTES: The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

are followed closely by sedatives at 16%, hallucinogens (adjusted) at 16%, and tranquilizers at 15%. *

- The inhalant estimates have been adjusted upward because we observed that not all users of one subclass of inhalants—amyl and butyl nitrites (described below)—report themselves as inhalant users. Because we included questions specifically about nitrite use for the first time in one 1979 questionnaire form, we were able to discover this problem and make estimates of the degree to which inhalant use was being underreported in the overall estimates. As a result, all prevalence estimates for inhalants have been increased, with the proportional increase being greater for the more recent time intervals because use of the other common inhalants, such as glue and aerosols, is more likely to have been discontinued prior to senior year.

- The specific classes of inhalants known as amyl and butyl nitrites, which are sold legally and go by the street names of "poppers" or "snappers" and such brand names as Locker Room and Rush, have been tried by one in every ten seniors (10%).

- We also discovered in 1979, by adding questions specifically about PCP use, that some users of the hallucinogenic drug PCP do not report themselves as users of hallucinogens—even though PCP is explicitly included as an example in the questions about hallucinogens. Thus, since 1979 the hallucinogen prevalence and trend estimates have been adjusted upward to correct for this known underreporting.**

- Lifetime prevalence for the specific hallucinogenic drug PCP now stands at 8%, slightly lower than that of the other most widely used hallucinogen, LSD (lifetime prevalence, 10%). Because PCP is showing a higher rate of discontinuation than LSD, there is an even greater proportional difference in their current usage rates.

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*See caution at the end of the introductory section concerning the interpretation of stimulant statistics.

**Because the data to adjust inhalant and hallucinogen use are available from only a single questionnaire form in a given year, the original uncorrected variables will be used in most analyses. We believe relational analyses will be least affected by these underestimates, and that the most serious impact is on prevalence estimates, which from now on will be adjusted appropriately.

TABLE 2

Prevalence (Percent Ever Used) and Recency of Use of Sixteen Types of Drugs (1981)

(N = 17500)

	Ever used	Past month	Past year, not past month	Not past year	Never used
Marijuana/Hashish	59.5	31.6	14.5	13.4	40.5
Inhalants	12.3	1.5	2.6	8.2	87.7
Inhalants Adjusted[a]	*17.4*	*2.3*	*3.7*	*11.4*	*82.6*
Amyl & Butyl Nitrites[b]	10.1	1.4	2.3	6.4	89.9
Hallucinogens	13.3	3.7	5.3	4.3	86.7
Hallucinogens Adjusted[c]	*15.7*	*4.4*	*5.7*	*5.6*	*84.3*
LSD[b]	9.8	2.5	4.0	3.3	90.2
PCP[b]	7.8	1.4	1.8	4.6	92.2
Cocaine	16.5	5.8	6.6	4.1	83.5
Heroin	1.1	0.2	0.3	0.6	98.9
Other opiates[d]	10.1	2.1	3.8	4.2	89.9
Stimulants[d]	32.2	15.8	10.2	6.2	67.8
Sedatives[d]	16.0	4.6	5.9	5.5	84.0
Barbiturates[d]	11.3	2.6	4.0	4.7	88.7
Methaqualone[d]	10.6	3.1	4.5	3.0	89.4
Tranquilizers[d]	14.7	2.7	5.3	6.7	85.3
Alcohol	92.6	70.7	16.3	5.6	7.4
Cigarettes	71.0	29.4	(41.6)[e]		29.0

[a] Adjusted for underreporting of amyl and butyl nitrites (see text).

[b] Data based on a single questionnaire form. N is one-fifth of N indicated.

[c] Adjusted for underreporting of PCP (see text).

[d] Only drug use which was not under a doctor's orders is included here.

[e] The combined total for the two columns is shown because the question asked did not discriminate between the two answer categories.

- Opiates other than heroin have been used by one in ten seniors (10%).

- Only 1.1% of the sample admitted to ever using any heroin, the most infrequently used drug. But given the highly illicit nature of this drug, we deem it the most likely to be underreported.

- Within the general class "sedatives," the specific drug methaqualone has now been used by about as many seniors (10.6%) as the other, much broader subclass of sedatives, barbiturates (11.3% lifetime prevalence).

- The illicit drug classes remain in roughly the same order when ranked by their prevalence in the most recent month and in the most recent year, as the data in Figure A illustrate. The only change in ranking occurs for inhalants, because use of certain of them, like glues and aerosols, tends to be discontinued at a relatively early age.

- The drug classes with the highest rates of discontinuation of use are heroin (55% of previous users had not used in the past twelve months), inhalants (66% of users, adjusted version), the hallucinogen PCP (59%), and the nitrites specifically (63%).

- Use of either of the two major licit drugs, alcohol and cigarettes, remains more widespread than use of any of the illicit drugs. Nearly all students have tried alcohol (93%) and the great majority (71%) have used it in the past month.

- Some 71% report having tried cigarettes at some time, and 29% smoked at least some in the past month.

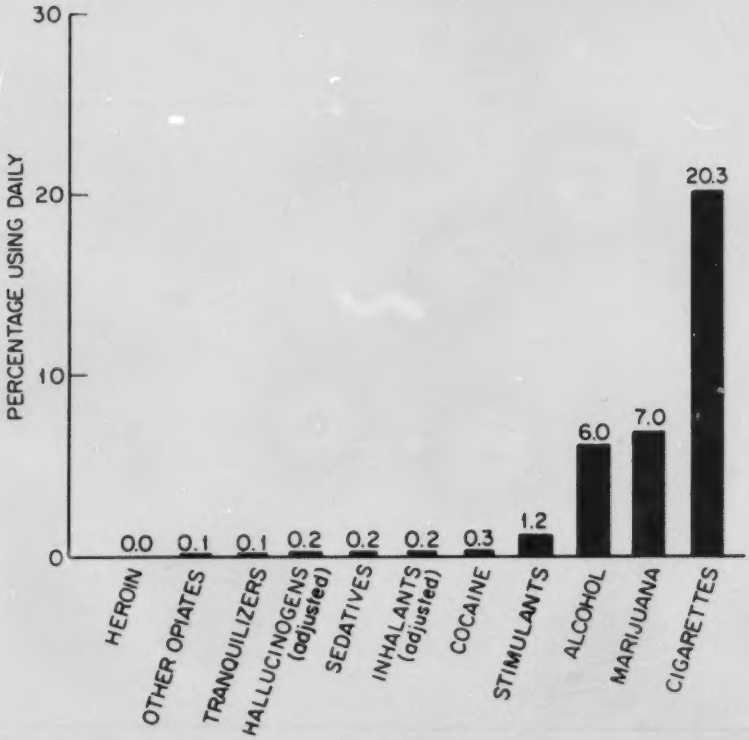
Daily Prevalence

- Frequent use of these drugs is of greatest concern from a health and safety standpoint. Table 9 and Figure B show the prevalence of daily or near daily use of the various classes of drugs. For all drugs, except cigarettes, respondents are considered daily users if they indicate that they had used the drug on twenty or more occasions in the preceding 30 days. For cigarettes, they explicitly state use of one or more cigarettes per day.

- The displays show that cigarettes are used daily by more of the respondents (20%) than any of the other drug classes. In fact, 13.5% say they smoke half-a-pack or more per day.

FIGURE B

Thirty-Day Prevalence of Daily Use
Eleven Types of Drugs, Class of 1981



- Another important fact is that marijuana is still used on a daily or near daily basis by a substantial fraction of the age group (7.0%). By comparison, 6.0% use alcohol that often.

- Less than 1.3% of the respondents report daily use of any one of the illicit drugs other than marijuana. Still, 1.2% report unsupervised daily use of amphetamines. (See caution at end of introductory section on stimulant statistics.) The next highest daily use figures are 0.3% for cocaine, 0.2% for inhalants (adjusted), and 0.2% for sedatives. While very low, these figures are not inconsequential, given that 1% of each high school class represents over 30,000 individuals.

- Tranquilizers and opiates other than heroin are used daily by only about 0.1%, as are the nitrites and hallucinogens (adjusted).

- Virtually no respondents (less than 0.05%) report daily use of heroin in senior year. However, in the opinion of the investigators heroin is the drug most likely to be underreported in surveys, so this absolute prevalence figure may well be understated.

- While daily alcohol use stands at 6.0% for this age group, a substantially greater proportion report occasional heavy drinking. In fact, 41% state that on at least one occasion during the prior two-week interval they had five or more drinks in a row.

Prevalence Comparisons for Important Subgroups

Sex Differences

- In general, higher proportions of males than females are involved in drug use, especially heavy drug use; however, this picture is a complicated one (see Tables 3 through 5).

- Overall marijuana use is somewhat higher among males, and daily use of marijuana is about twice as frequent among males (9.6% vs. 4.2% for females).

- Males also have considerably higher prevalence rates on most other illicit drugs. The annual prevalence (Table 3) for inhalants, hallucinogens, heroin, and the specific drugs PCP, LSD and the nitrites tend to be one and one-half to two times as high among males as among females. Males also report somewhat higher annual rates of use than females for cocaine, methaqualone, barbiturates, and opiates other than heroin. Further, males account for an even greater

share of the frequent or heavy users of these various classes of drugs (data not shown).

- Only in the case of stimulants are the annual prevalence rates (as well as frequent usage patterns) higher among females. Annual prevalence is 27% for females vs. 25% for males. We suspect that this difference may, in fact, be an artifact, since substantially more females use over-the-counter diet preparations and may mistakenly include them in their responses.

- Despite the fact that all but one of the individual classes of illicit drugs are used more by males than by females, virtually equal proportions (33% for males vs. 34% for females) of both sexes report using some illicit drug other than marijuana during the last year (see Figure D). Even if amphetamine use is excluded from the comparisons (for the reasons mentioned at the end of the introductory section of this report), roughly comparable projections of both sexes (25% for males vs. 22% for females) report using some illicit drug other than marijuana during the year. If one thinks of going beyond marijuana as an important threshold point in the sequence of illicit drug use, then nearly equal proportions of both sexes were willing to cross that threshold at least once during the year. However, on the average the female "users" take fewer types of drugs and use them with less frequency than their male counterparts.

- Frequent use of alcohol tends to be disproportionately concentrated among males. Daily use, for example, is reported by 8.4% of the males but by only 3.4% of the females. Also, males drink large quantities of alcohol in a single sitting more often than do females.

- Finally, for cigarettes, there is a very slight sex difference in the prevalence of smoking a half-a-pack or more daily, this time with females showing the higher proportion of users. Of the females, 13.8% smoke this heavily versus 12.8% of the males. There is a larger difference in proportions reporting any use during the past month: 32% of the females versus 27% of the males.

Differences Related to College Plans

- Overall, seniors who are expecting to complete four years of college (referred to here as the "college-bound") have lower rates of illicit drug use than those not expecting to do so (see Tables 3 through 5).

TABLE 3

Lifetime Prevalence of Use of Sixteen Types of Drugs by Subgroups, Class of 1981

	Marijuana	Inhalants [a]	Amyl/Butyl Nitrites	Hallucinogens [a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes
All seniors	59.5	12.3	10.1	13.3	9.8	7.8	16.5	1.1	10.1	32.2	16.0	11.3	10.6	14.7	92.6	71.0
Sex:																
Male	62.5	15.3	13.0	15.5	11.7	9.0	18.7	1.2	11.3	30.5	17.5	12.4	12.3	14.4	93.4	68.6
Female	56.2	9.4	7.1	10.6	7.4	6.5	13.8	0.8	8.9	33.5	13.9	9.9	8.5	14.9	91.8	73.3
College Plans:																
None or under 4 yrs	63.5	14.1	11.2	15.7	11.8	10.6	18.1	1.2	11.8	38.3	19.8	14.1	13.4	17.1	92.9	77.0
Complete 4 yrs	55.9	11.0	9.3	11.0	7.8	5.6	14.4	0.9	8.5	27.6	12.7	8.8	8.1	12.9	92.7	66.6
Region:																
Northeast	67.8	15.0	13.3	18.1	12.2	10.6	21.7	1.0	11.7	34.7	17.2	12.1	12.1	15.5	96.4	70.8
North Central	59.9	11.7	10.5	15.3	11.8	7.0	14.0	1.2	10.3	36.2	15.9	12.1	10.1	14.5	94.4	73.8
South	50.8	10.3	7.9	6.6	5.2	5.9	10.0	0.9	7.1	25.2	15.2	10.0	10.6	14.2	88.8	71.0
West	63.2	13.1	9.5	15.5	11.2	9.2	26.4	1.1	13.2	34.5	15.6	11.0	9.3	15.2	90.6	66.1
Population Density:																
Large SMSA	65.9	12.2	10.1	17.6	12.0	9.1	21.9	0.9	11.4	34.2	17.6	11.8	12.8	15.4	94.5	71.4
Other SMSA	59.6	12.2	11.0	13.5	10.5	7.5	15.8	1.0	10.7	31.7	15.8	10.8	10.7	14.8	92.5	69.1
Non-SMSA	54.6	12.5	9.2	9.9	7.2	7.1	13.3	1.3	8.4	31.3	14.9	11.4	8.7	14.2	91.3	73.1

[a] Unadjusted for known underreporting of certain drugs. See page 16.

- Annual marijuana use is reported by 43% of the college-bound vs. 50% of the noncollege-bound.

- There is a substantial difference in the proportion of these two groups using any illicit drug(s) other than marijuana. In 1981, 30% of the college-bound reported any such behavior in the prior year vs. 38% of the noncollege-bound. (If amphetamine use is excluded from these "other illicit drugs," this difference diminishes to 22% vs. 25%, respectively.)

- For most of the specific illicit drugs other than marijuana, annual prevalence is substantially higher among the noncollege-bound, as Table 4 illustrates.

- Frequent use of many of these illicit drugs shows even larger contrasts related to college plans. Daily marijuana use, for example, is twice as high among those not planning four years of college (9.4%) as among the college-bound (4.8%).

- Frequent alcohol use is also more prevalent among the noncollege-bound. For example, drinking on a daily basis is reported by 7.7% of the non-college bound vs. 4.6% of the college-bound. On the other hand, there are practically no differences between these groups in lifetime, annual, or monthly prevalence.

- By far the largest difference in substance use between the college and noncollege-bound involves cigarette smoking. There is a dramatic difference here, with only 8% of the college-bound smoking a half-a-pack or more daily compared with 21% of the noncollege-bound.

Regional Differences

- There are now some fair-sized regional differences in rates of illicit drug use among high school seniors. The highest rate is in the Northeast, where 59% say they have used a drug illicitly in the past year, followed by the West with 56%, and the North Central with 53%. The South is somewhat lower than the other regions with only 44% having used any illicit drug (see Figure H).

- There is also regional variation in terms of the percent using some illicit drug other than marijuana in the past year: 39% in the West, 38% in the Northeast, 36% in the North Central, vs. only 26% in the South. (The West comes out highest due in part to its unusual level of cocaine use.) If amphetamine use is excluded from

TABLE 4

Annual Prevalence of Use of Sixteen Types of Drugs by Subgroups, Class of 1981

	Marijuana	Inhalants [a]	Amyl/Butyl Nitrites	Hallucinogens [a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes [b]
All seniors	46.1	4.1	3.7	9.0	6.5	3.2	12.4	0.5	5.9	26.0	10.5	6.6	7.6	8.0	87.0	13.5
Sex:																
Male	49.2	5.1	5.1	10.9	8.0	4.0	13.8	0.6	6.5	24.8	11.6	7.2	8.8	8.0	88.9	12.8
Female	42.5	3.2	2.3	6.8	4.7	2.3	10.4	0.3	5.3	26.9	9.2	5.8	6.2	7.7	85.1	13.8
College Plans:																
None or under 4 yrs	49.7	4.3	4.4	10.7	8.0	4.2	12.4	0.5	7.2	30.9	13.1	8.1	9.8	9.4	87.0	20.8
Complete 4 yrs	42.6	4.0	3.4	7.4	5.0	2.4	11.5	0.5	4.8	22.3	8.3	5.1	5.7	6.9	87.4	7.5
Region:																
Northeast	53.2	5.2	4.0	12.9	9.0	3.5	16.8	0.5	7.2	28.8	11.4	6.8	8.6	8.3	93.8	16.6
North Central	46.8	3.8	3.3	10.3	7.8	3.7	9.4	0.6	6.2	30.1	10.9	7.5	7.5	7.8	89.1	16.0
South	38.0	3.2	3.9	4.1	3.4	2.9	6.8	0.5	4.1	19.6	9.9	5.5	7.7	7.8	80.7	12.0
West	49.6	4.7	3.9	10.4	6.3	2.3	22.1	0.5	7.2	26.6	9.6	6.5	6.0	8.0	84.5	7.3
Population Density:																
Large SMSA	51.4	4.7	3.4	12.0	8.0	3.3	17.5	0.3	6.9	28.0	11.6	6.9	9.0	8.3	90.5	15.4
Other SMSA	46.4	4.0	4.5	9.0	6.9	3.2	11.5	0.5	6.3	25.5	10.8	6.4	7.9	8.1	86.5	12.4
Non-SMSA	41.6	3.7	3.1	6.8	4.9	3.1	9.4	0.7	4.8	25.1	9.3	6.6	6.1	7.5	84.8	13.6

[a] Unadjusted for known underreporting of certain drugs. See page 16.

[b] Based on 30-day prevalence of a half pack a day of cigarettes, or more. Annual prevalence is not available.

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"the use of illicit drugs other than marijuana," the rankings remain the same: 31% in the West, 28% in the Northeast, 23% in the North Central, and 18% in the South.

- As Table 4 illustrates, the Northeast shows the highest annual rate of use for many of the individual illicit substances—these include marijuana, inhalants, the nitrites specifically, hallucinogens, LSD specifically, alcohol, and cigarettes. The West shows by far the highest level of cocaine use, yet it has the lowest prevalence of PCP and methaqualone use. The South shows the lowest usage levels for marijuana, hallucinogens, inhalants, cocaine, other opiates, and stimulants. Barbiturates and tranquilizers have roughly equal prevalence rates across all regions of the country. (All of these are replications of last year's findings).*

- Alcohol use tends to be somewhat lower in the South and West than it is in the Northeast and North Central.

- Again, one of the largest differences occurs for regular cigarette smoking. Smoking half-a-pack or more a day occurs most often in the Northeast (17% of seniors), followed by the North Central (16%), the South (12%), and with the West distinctly lower (7%). This general pattern of regional differences has been replicated consistently since 1975.

Differences Related to Population Density

- Three levels of population density (or urbanicity) have been distinguished for analytical purposes: (1) Large SMSA's, which are the twelve largest Standard Metropolitan Statistical Areas in the 1970 Census; (2) Other SMSA's, which are the remaining Standard Metropolitan Statistical Areas; and (3) Non-SMSA's, which are sampling areas not designated as metropolitan.

- Overall illicit drug use is highest in the largest metropolitan areas (58% annual prevalence), slightly lower in the other metropolitan areas (52%), and lowest in the nonmetropolitan areas (47%).

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*The replicability of these findings (as well as those presented below for urbanicity) is mentioned here because findings related to region and urbanicity are more subject to sampling error than are findings related to sex, college plans, or other subgroup divisions which cut across all schools in the sample.

TABLE 5

Thirty-Day Prevalence of Use of Sixteen Types of Drugs by Subgroups, Class of 1981

	Marijuana	Inhalants[a]	Amyl/Butyl Nitrites	Hallucinogens[a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes
All seniors	31.6	1.5	1.4	3.7	2.5	1.4	5.8	0.2	2.1	15.8	4.6	2.6	3.1	2.7	70.7	29.4
Sex:																
Male	35.3	1.9	2.2	4.6	3.4	1.7	6.3	0.3	2.4	14.7	5.2	2.9	3.4	2.7	75.7	26.5
Female	27.3	1.1	0.6	2.6	1.4	1.0	5.0	0.1	1.8	16.7	3.9	2.4	2.4	2.6	65.7	31.6
College Plans:																
None or under 4 yrs	36.1	1.6	2.1	4.3	2.9	1.9	5.6	0.3	3.0	19.4	5.8	3.2	4.2	3.3	72.1	38.1
Complete 4 yrs	27.4	1.5	1.0	3.0	2.0	1.0	5.5	0.1	1.4	13.0	3.4	2.0	2.1	2.2	70.0	22.3
Region:																
Northeast	38.2	1.9	0.9	6.3	4.1	1.5	8.1	0.2	2.7	18.4	4.9	2.7	3.4	2.7	80.4	31.5
North Central	33.0	1.5	1.6	4.5	3.3	1.3	3.8	0.2	2.2	18.9	4.6	2.8	3.2	3.0	73.6	32.4
South	26.7	1.2	1.4	1.4	1.1	1.6	2.9	0.2	1.5	11.5	5.0	2.7	3.5	2.6	62.9	28.9
West	32.0	1.7	1.7	2.8	1.1	0.8	12.0	0.2	2.1	14.3	3.2	2.2	1.6	2.3	65.3	21.8
Population Density:																
Large SMSA	36.3	2.1	1.3	5.3	3.3	1.0	8.8	0.2	2.5	17.7	5.0	2.5	3.7	2.9	75.5	30.6
Other SMSA	31.4	1.3	1.5	3.7	2.6	1.5	4.9	0.3	2.2	15.0	4.6	2.5	3.1	2.5	69.1	27.4
Non-SMSA	28.0	1.3	1.4	2.5	1.7	1.5	4.7	0.2	1.6	15.3	4.2	2.9	2.6	2.7	68.9	30.9

[a]Unadjusted for known underreporting of certain drugs. See page 16.

- The same ranking occurs for the use of illicit drugs other than marijuana: 38% annual prevalence in the largest cities, 33% in the other cities, and 31% in the nonmetropolitan areas. (With amphetamine use excluded, these numbers drop—to 29%, 24%, and 20%, respectively—but still remain in the same rank order.)

- For specific drugs, the largest absolute difference associated with urbanicity occurs for marijuana, which has an annual prevalence of 51% in the large cities but only 42% in the nonmetropolitan areas (Table 4).

- Cocaine also shows a strong urbanicity difference; there is almost twice as much use in the large metropolitan areas (17.5%) compared to the non-metropolitan areas (9.4%). The same is true for hallucinogens (12.0% versus 6.8%) and for LSD specifically (8.0% versus 4.9%).

- There is some tendency for other types of drug use to be associated positively with urbanicity; however, the relationships are not strong nor always consistent from one year to another.

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RECENT TRENDS

This section summarizes trends in drug use, comparing the seven graduating classes of 1975 through 1981. As in the previous section, the outcomes discussed include measures of lifetime use, use during the past year, use during the past month, and daily use. Also, trends are compared among the key subgroups.

Trends in Prevalence 1975-1981: All Seniors

- It appears that 1978 and 1979 marked the crest of a long and dramatic rise in marijuana use among American high school students. As Tables 6 through 9 illustrate, annual and 30-day prevalence of marijuana use hardly changed at all between 1978 and 1979, following a steady rise in the preceding years. In 1980 both statistics dropped for the first time and this year dropped still further. Both are now about 5% below their all-time highs. Lifetime prevalence, which had remained unchanged in 1980, finally began to drop in '81. As we discuss later, there have been some significant changes in the attitudes and beliefs these young people hold in relation to marijuana; these changes suggest that the downward shift in marijuana use is likely to continue.

- Of greater importance is the even sharper downward trend now occurring for daily marijuana use. Between 1975 and 1978 there was an almost two-fold increase in daily use. The proportion reporting daily use in the class of 1975 (6.0%) came as a surprise to many. That proportion then rose rapidly, so that by 1978 one in every nine high school seniors (10.7%) indicated that he or she used the drug on a daily or nearly daily basis (defined as use on 20 or more occasions in the last 30 days). In 1979 we reported that this rapid and troublesome increase had come to a halt, with a 0.4% drop occurring that year. In 1980 a larger drop of 1.2% occurred; and this year we report an even larger

TABLE 6

Trends in Lifetime Prevalence of Sixteen Types of Drugs

	Percent ever used							
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Approx. N =	(9400)	(15400)	(17100)	(17800)	(15500)	(15900)	(17500)	
Marijuana/Hashish	47.3	52.8	56.4	59.2	60.4	60.3	59.5	-0.8
Inhalants	NA	10.3	11.1	12.0	12.7	11.9	12.3	+0.4
Inhalants Adjusted[a]	NA	NA	NA	NA	*18.7*	*17.6*	*17.4*	-0.2
Amyl & Butyl Nitrites[b]	NA	NA	NA	NA	11.1	11.1	10.1	-1.0
Hallucinogens	16.3	15.1	13.9	14.3	14.1	13.3	13.3	0.0
Hallucinogens Adjusted[c]	NA	NA	NA	NA	*18.8*	*15.7*	*15.7*	*0.0*
LSD[b]	11.3	11.0	9.8	9.7	9.5	9.3	9.8	+0.5
PCP[b]	NA	NA	NA	NA	12.8	9.6	7.8	-1.8s
Cocaine	9.0	9.7	10.8	12.9	15.4	15.7	16.5	+0.8
Heroin	2.2	1.8	1.8	1.6	1.1	1.1	1.1	0.0
Other opiates[d]	9.0	9.6	10.3	9.9	10.1	9.8	10.1	+0.3
Stimulants[d]	22.3	22.6	23.0	22.9	24.2	26.4	32.2	+5.8sss
Sedatives[d]	18.2	17.7	17.4	16.0	14.6	14.9	16.0	+1.1
Barbiturates[d]	16.9	16.2	15.6	13.7	11.8	11.0	11.3	+0.3
Methaqualone[d]	8.1	7.8	8.5	7.9	8.3	9.5	10.6	+1.1
Tranquilizers[d]	17.0	16.8	18.0	17.0	16.3	15.2	14.7	-0.5
Alcohol	90.4	91.9	92.5	93.1	93.0	93.2	92.6	-0.6
Cigarettes	73.6	75.4	75.7	75.3	74.0	71.0	71.0	0.0

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001.

NA indicates data not available.

[a] Adjusted for underreporting of amyl and butyl nitrites (see text).

[b] Data based on a single questionnaire form. N is one-fifth of N indicated.

[c] Adjusted for underreporting of PCP (see text).

[d] Only drug use which was not under a doctor's orders is included here.

TABLE 7

Trends in Annual Prevalence of Sixteen Types of Drugs

	Percent who used in last twelve months							
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Approx. N =	(9400)	(15400)	(17100)	(17800)	(15500)	(15900)	(17500)	
Marijuana/Hashish	40.0	44.5	47.6	50.2	50.8	48.8	46.1	-2.7s
Inhalants[e]	NA	3.0	3.7	4.1	5.4	6.6	6.1	-0.5
Inhalants Adjusted[a]	NA	NA	NA	NA	9.2	7.8	6.0	-1.8
Amyl & Butyl Nitrites[b]	NA	NA	NA	NA	6.5	5.7	3.7	-2.0ss
Hallucinogens	11.2	9.4	8.8	9.6	9.9	9.3	9.0	-0.3
Hallucinogens Adjusted[c]	NA	NA	NA	NA	*12.8*	*10.8*	*10.1*	-0.5
LSD[b]	7.2	6.4	5.5	6.3	6.6	6.5	6.5	0.0
PCP[b]	NA	NA	NA	NA	7.0	4.4	3.2	-1.2s
Cocaine	5.6	6.0	7.2	9.0	12.0	12.3	12.4	+0.1
Heroin	1.0	0.8	0.8	0.8	0.5	0.5	0.5	0.0
Other opiates[d]	5.7	5.7	6.4	6.0	6.2	6.3	5.9	-0.4
Stimulants[d]	16.2	15.8	16.3	17.1	18.3	20.8	26.0	+5.2sss
Sedatives[d]	11.7	10.7	10.8	9.9	9.9	10.3	10.5	+0.2
Barbiturates[d]	10.7	9.6	9.3	8.1	7.5	6.8	6.6	-0.2
Methaqualone[d]	5.1	4.7	5.2	4.9	5.9	7.2	7.6	+0.4
Tranquilizers[d]	10.6	10.3	10.8	9.9	9.6	8.7	8.0	-0.7
Alcohol	84.8	85.7	87.0	87.7	88.1	87.9	87.0	-0.9
Cigarettes	NA	NA	NA	NA	NA	NA	NA	NA

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

NA indicates data not available.

[a] Adjusted for underreporting of amyl and butyl nitrites (see text).

[b] Data based on a single questionnaire form. N is one-fifth of N indicated.

[c] Adjusted for underreporting of PCP (see text).

[d] Only drug use which was not under a doctor's orders is included here.

[e] Data based on four questionnaire forms. N is four-fifths of N indicated.

TABLE 8

Trends in Thirty-Day Prevalence of Sixteen Types of Drugs

	Percent who used in last thirty days							
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Approx. N =	(9400)	(13400)	(17100)	(17800)	(15500)	(15900)	(17500)	
Marijuana/Hashish	27.1	32.2	35.4	37.1	36.5	33.7	31.6	-2.1s
Inhalants	NA	0.9	1.3	1.5	1.7	1.4	1.5	+0.1
Inhalants Adjusted[a]	NA	NA	NA	NA	3.1	2.7	2.3	-0.4
Amyl & Butyl Nitrites[b]	NA	NA	NA	NA	2.4	1.8	1.4	-0.4
Hallucinogens	4.7	3.4	4.1	3.9	4.0	3.7	3.7	0.0
Hallucinogens Adjusted[c]	NA	NA	NA	NA	5.5	4.4	4.4	0.0
LSD	2.3	1.9	2.1	2.1	2.4	2.3	2.5	+0.2
PCP[b]	NA	NA	NA	NA	2.4	1.4	1.4	0.0
Cocaine	1.9	2.0	2.9	3.9	5.7	5.2	5.8	+0.6
Heroin	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.0
Other opiates[d]	2.1	2.0	2.8	2.1	2.4	2.4	2.1	-0.3
Stimulants[d]	8.5	7.7	8.8	8.7	9.9	12.1	15.8	+3.7sss
Sedatives[d]	5.4	4.5	5.1	4.2	4.4	4.8	4.6	-0.2
Barbiturates[d]	4.7	3.9	4.3	3.2	3.2	2.9	2.6	-0.3
Methaqualone[d]	2.1	1.6	2.3	1.9	2.3	3.3	3.1	-0.2
Tranquilizers[d]	4.1	4.0	4.6	3.4	3.7	3.1	2.7	-0.4
Alcohol	68.2	68.3	71.2	72.1	71.8	72.0	70.7	-1.3
Cigarettes	36.7	38.8	38.4	36.7	34.4	30.5	29.4	-1.1

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001.

NA indicates data not available.

[a] Adjusted for underreporting of amyl and butyl nitrites (see text).

[b] Data based on a single questionnaire form. N is one-fifth of N indicated.

[c] Adjusted for underreporting of PCP (see text).

[d] Only drug use which was not under a doctor's orders is included here.

TABLE 9

Trends in Thirty-Day Prevalence of Daily Use of Sixteen Types of Drugs

	Percent who used daily in last thirty days							
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Approx. N =	(9400)	(15400)	(17100)	(17800)	(15500)	(15900)	(17500)	
Marijuana/Hashish	6.0	8.2	9.1	10.7	10.3	9.1	7.0	-2.1sss
Inhalants	NA	0.0	0.0	0.1	0.0	0.1	0.1	0.0
Inhalants Adjusted[a]	NA	NA	NA	NA	*0.1*	*0.2*	*0.2*	*0.0*
Amyl & Butyl Nitrites[b]	NA	NA	NA	NA	0.0	0.1	0.1	0.0
Hallucinogens	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
Hallucinogens Adjusted[c]	NA	NA	NA	NA	*0.2*	*0.2*	*0.1*	*-0.1*
LSD[b]	0.0	0.0	0.0	0.0	0.0	0.0	0.1	+0.1
PCP[b]	NA	NA	NA	NA	0.1	0.1	0.1	0.0
Cocaine	0.1	0.1	0.1	0.1	0.2	0.2	0.3	+0.1
Heroin	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other opiates[d]	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.0
Stimulants[d]	0.5	0.4	0.5	0.5	0.6	0.7	1.2	+0.5sss
Sedatives[d]	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.0
Barbiturates[d]	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.0
Methaqualone[d]	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
Tranquilizers[d]	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.0
Alcohol	5.7	5.6	6.1	5.7	6.9	6.0	6.0	0.0
Cigarettes	26.9	28.8	28.8	27.5	25.4	21.3	20.3	-1.0s

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001.

NA indicates data not available.

[a] Adjusted for underreporting of amyl and butyl nitrites (see text).

[b] Data based on a single questionnaire form. N is one-fifth of N indicated.

[c] Adjusted for underreporting of PCP (see text).

[d] Only drug use which was not under a doctor's orders is included here.

drop of 2.1%, bringing the daily usage rate down to 7.0%—or about one in every fourteen seniors. As later sections of this report document, much of this reversal appears to be due to increasing concerns about possible adverse effects from regular use, as well as to the perception that peers are now more disapproving of regular marijuana use.

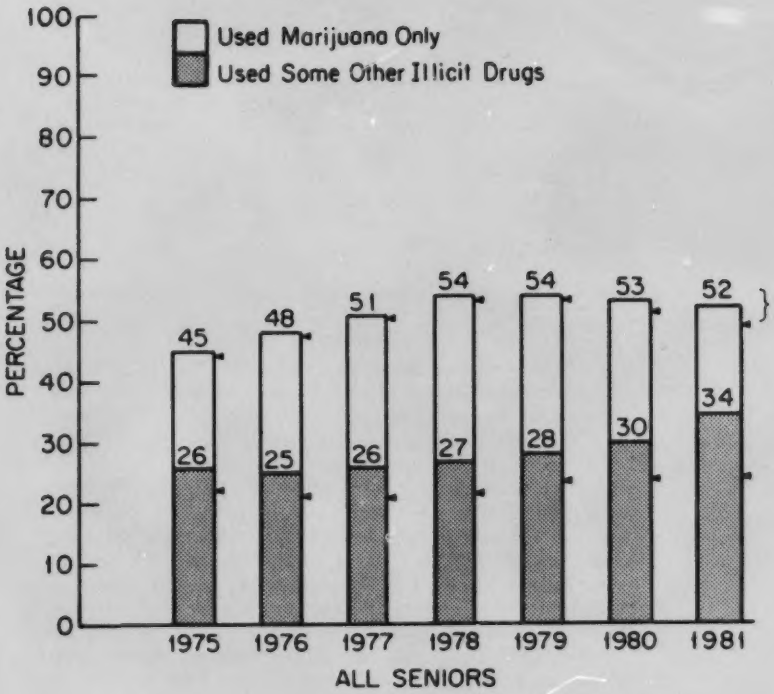
- Until 1978, the proportion of seniors involved in any illicit drug use had increased, primarily because of the increase in marijuana use. About 54% of the classes of 1978 and 1979 reported having tried at least one illicit drug during the last year, up from 45% in the class of 1975. Between 1979 and 1980, however, the proportion reporting using any illicit drug during the year dropped by 1%; and it dropped by another 1% again this year. This very gradual reversal appears to be due primarily to the change in marijuana use.

- But, as Figure C illustrates, since 1976 there has been a very gradual, steady increase in the proportion who use some illicit drug other than marijuana—an increase which accelerated considerably this year. The proportion going beyond marijuana in their lifetime has risen from 35% to 43% between 1976 and 1981, and the annual prevalence of such behaviors has risen from 25% to 34%. Most of this rise appeared to be due to the increasing popularity of cocaine with this age group between 1976 and 1979, and then due to the increasing use of stimulants since 1979.

  However, as stated earlier, we believe that this upward shift has been exaggerated by respondents including instances of using over-the-counter substances in their reports of amphetamine use. (See discussion at the end of the introductory section.) A rather different picture of what trends have been occurring in the proportions using illicit drugs other than marijuana emerges when self-reported amphetamine use is excluded from the calculations altogether. (This obviously understates the percent using illicits other than marijuana in any given year, but it might yield a more accurate picture of trends in proportions.) Figure C (and other figures to follow) have been annotated with small markings next to each year's bar, showing where the shaded area would stop if amphetamines were excluded. The trend in these markings shows that the proportion going beyond marijuana to illicits other than amphetamines has been virtually constant since 1979 and, in fact, has risen only 1.4% since 1975.

FIGURE C

Trends in Annual Prevalence of Illicit Drug Use
All Seniors



NOTES: The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

The arrowheads indicate the percentages which result if stimulants are excluded from the definition of "illicit drugs."

- Although the overall proportion using illicit drugs other than marijuana has changed fairly gradually during recent years, more varied and turbulent changes have been occurring for specific drugs within the class. (See Tables 6, 7, and 8 for trends in lifetime, annual, and monthly prevalence figures for each class of drugs.)

- From 1976 to 1979 cocaine exhibited a dramatic and accelerating increase in popularity, with annual prevalence going from 6% in the class of 1976 to 12% in the class of 1979—a two-fold increase in just three years. This rise nearly halted in 1980, however. This year, current (30-day) prevalence is only .1% higher than it was two years ago, annual prevalence only .4% higher, and lifetime prevalence 1.1% higher (at 16.5%).

- Like cocaine use, inhalant use had been rising steadily in the mid 1970's, though more slowly and from a lower overall level. Annual prevalence (in the unadjusted version) rose from 3.0% in 1976 to 5.4% in 1979. Since then, however, there has been a decline—in part due to a substantial drop in the use of the amyl and butyl nitrites, for which annual prevalence declined from 6.5% in 1979 to 3.7% in 1981.

- Stimulant use, which had remained relatively unchanged between 1975 and 1978, began to show evidence of a gradual increase in use in 1979. A further increase occurred in 1980, and an even greater increase this year. Since 1976, reported annual prevalence has risen by 10.2% (from 15.8% in 1976 to 26.0% in 1981). Daily use has tripled, from 0.4% in 1976 to 1.2% in 1981. As stated earlier, we think these increases are exaggerated—perhaps sharply exaggerated—by respondents in our more recent surveys including non-amphetamine, over-the-counter diet pills (as well as look-alike and sound-alike pills) in their answers. (A further discussion of this shift is contained in a later section on the degree and duration of highs experienced.) Despite the biases introduced by diet and stay-awake pills, we deduce from some other questions on exposure to people who are taking amphetamines "to get high or for kicks," that there has been a real increase in recreational use over the past year. (See Table 18. See also the section on Degree and Duration of Highs.)*

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*One way to approach the problem of adjusting the amphetamine use trend lines to correct for the inappropriate inclusion of over-the-counter diet and stay-awake pills, is to exclude from the count any individuals who give dieting and/or staying awake as their only reason(s)

- For sedatives the sustained, gradual decline between 1975 and 1979 appears to have halted, and perhaps even reversed. Lifetime prevalence dropped steadily from 18.2% in 1975 to 14.6% in 1979, and then began to increase slowly to 16% in 1981. (Annual and monthly prevelance rates showed no appreciable change during the past year.) The overall trend lines for sedatives, however, mask the differential trends occurring for each of its two components. (See Figure E.) Barbiturate use has dropped sharply since 1975, and it continues to drop this year, though more gradually. Methaqualone use, on the other hand, has risen sharply since 1976, and it continues to rise this year—also more gradually. Since methaqualone is used more frequently with cocaine than are barbiturates (data not shown here)—presumably to bring the user "down"—the increase in methaqualone use may be partly due to the recent increases in cocaine use.

- Tranquilizers continued their steady decline this year—a decline which began in 1977. Annual prevalence has dropped from 11% in 1977 to 8% in 1981.

- Between 1975 and 1979 the prevalence of heroin use had been dropping rather steadily. Lifetime prevalence dropped from 2.2% in 1975 to 1.1% in 1979 and annual prevalence has also dropped by half, from 1.0% in 1975 to 0.5% in 1979. This decline halted in 1980 and this year's statistics remained identical to last year's. But perhaps the fact of greatest significance is that use did not increase, considering the greater availability and purity of heroin reported to be entering the United States as a result of instability in the Middle East.**

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for using amphetamines. Such analyses were conducted using the single questionnaire form which asks about reasons for use. The results indicate that the upward sloping trend lines for amphetamine use would be flattened somewhat in their adjusted version, but would still show an increase in use since 1976. With these adjustments, for example, the annual prevalence figures come out as 15% in 1976, rising steadily to 18% in 1980, and then jumping to 23% in 1981. These figures compare with 16%, 21% and 26%, based on all five forms, without any adjustment.

**Since the impact to date is alleged to be greatest in the Northeastern cities, we examined heroin statistics for the Northeast specifically (see the full 1981 volume for these details) and found no increase there either.

- The use of opiates other than heroin continues to remain quite stable, with annual prevalence at or near 6% every year since 1975.

- Hallucinogen use (unadjusted for underreporting of PCP) declined some in the middle of the decade (from 11.2% in 1975 to 9.6% in 1978 on annual prevalence), but this decline halted in 1979, and there has been rather little change since.

- LSD, one of the major drugs comprising the hallucinogen class, has exhibited a trend pattern which is very similar to that of the class as a whole: that is, there was a decline from 1975 to 1977, but considerable stability since then.

- The specific hallucinogen PCP showed a sizeable (and statistically significant) decrease again this year, after an even larger drop in 1980. (Measures for the use of this drug were started in 1979.) Annual prevalence, for example, dropped by one half in just two years, from 7.0% in 1979 to 3.2% in 1981. Oddly, although lifetime and annual prevalence both dropped significantly this year, 30-day prevalence remained stable at 1.4%.

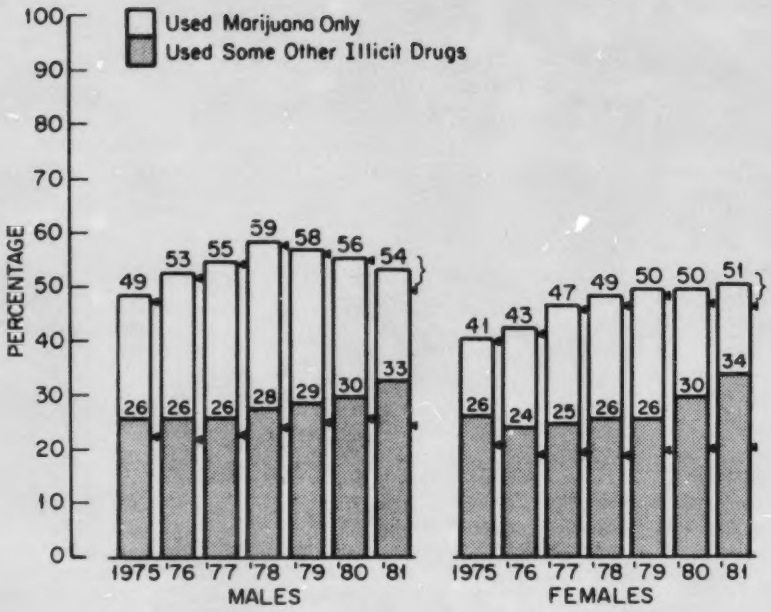
- As can be seen from these varied patterns for the several drug classes, while the overall proportion of seniors using any illicit drugs other than marijuana or amphetamines has not changed a great deal, the mix of drugs they are using obviously has been changing.

- Turning to the licit drugs, between 1975 and 1978 there was a small upward shift in the prevalence of alcohol use (except for daily use) among seniors. To illustrate, the annual prevalence rate rose steadily from 85% in 1975 to 88% in 1978, and monthly prevalence rose from 68% to 72%. Since 1978, however, the alcohol prevalence figures have remained nearly constant. This year there was a small, and not statistically significant, drop in the lifetime, annual, and 30-day prevalence rates; but it is still too early to tell whether this is due to any real downturn.

- The rate of daily alcohol use, which since 1976 has been exceeded by the daily marijuana use rate in this age group, has remained quite steady at about 6% since our first survey in 1975. In fact, it stands at exactly that number both this year and last. However, there had been some increase in the frequency of binge drinking in the earlier part of that time interval. When asked whether they had taken five or more drinks in a row during the prior two weeks, 37% of the

FIGURE D

Trends in Annual Prevalence of Illicit Drug Use
by Sex



NOTES: The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

The arrowheads indicate the percentages which result if stimulants are excluded from the definition of "illicit drugs."

FIGURE E

Trends in Annual Prevalence of Fifteen Drugs by Sex

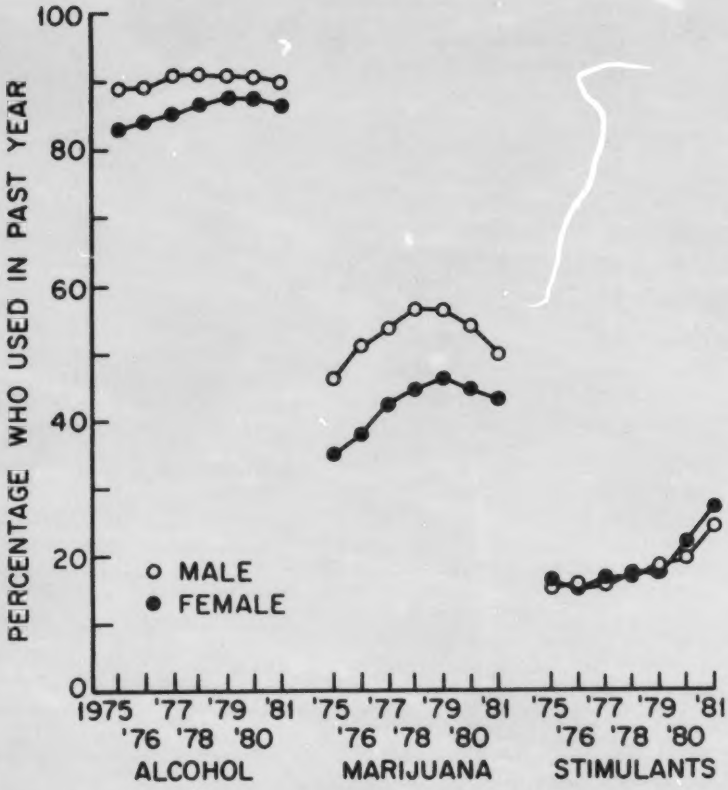


FIGURE E (cont.)

Trends in Annual Prevalence of Fifteen Drugs by Sex

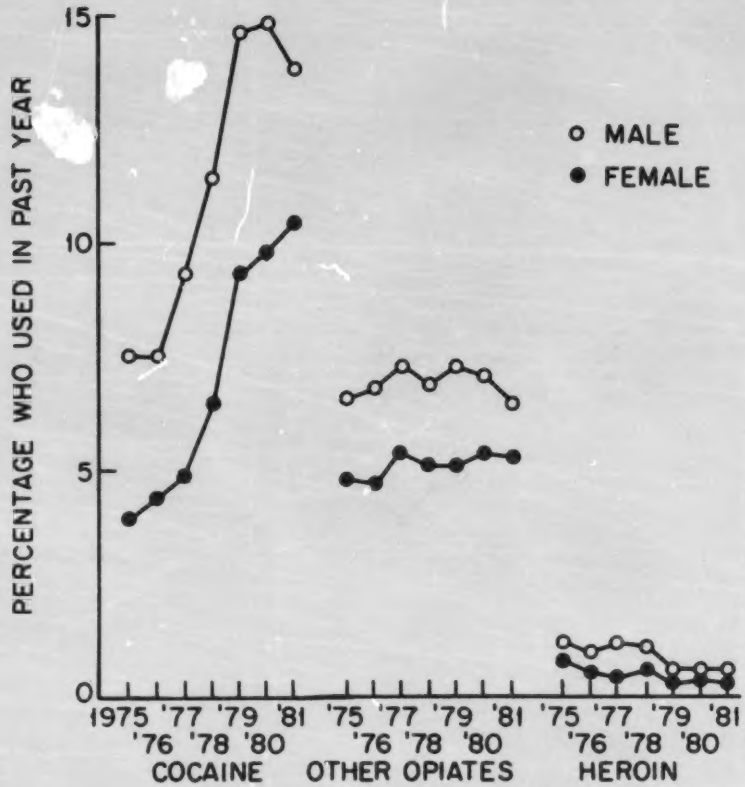


FIGURE E (cont.)

Trends in Annual Prevalence of Fifteen Drugs
by Sex

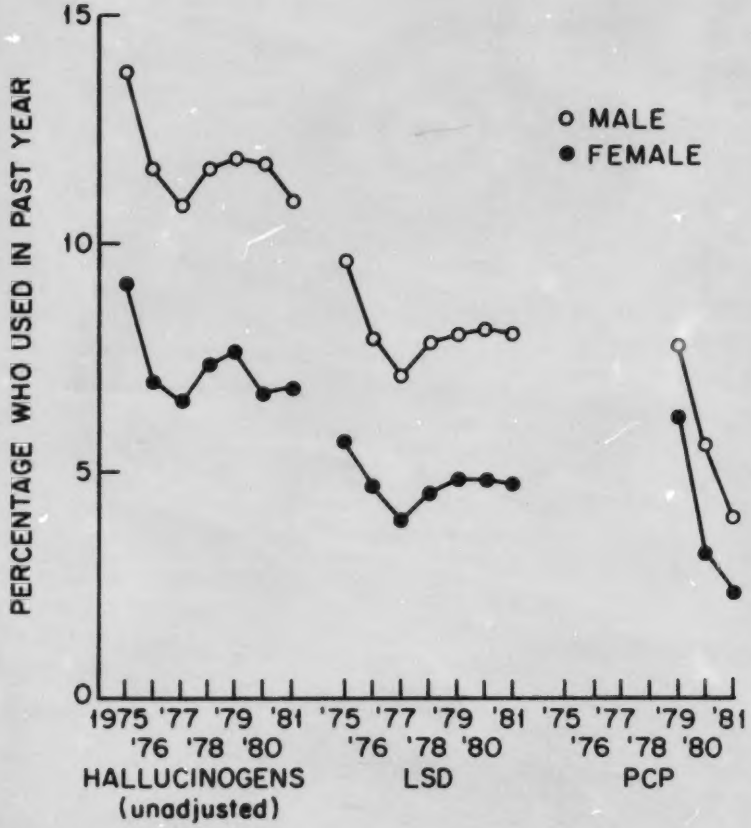


FIGURE E (cont.)

Trends in Annual Prevalence of Fifteen Drugs
by Sex

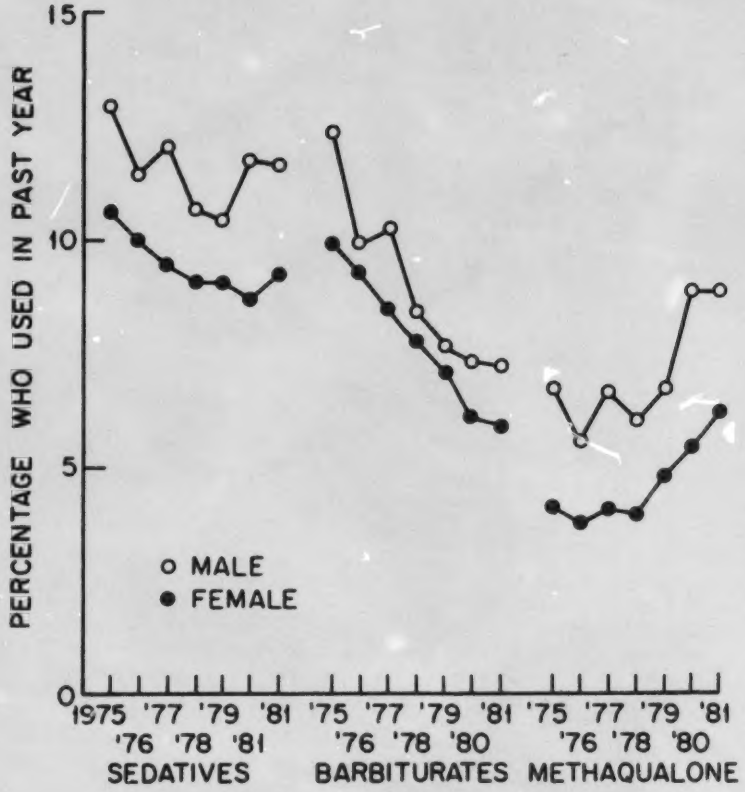


FIGURE E (cont.)

Trends in Annual Prevalence of Fifteen Drugs
by Sex

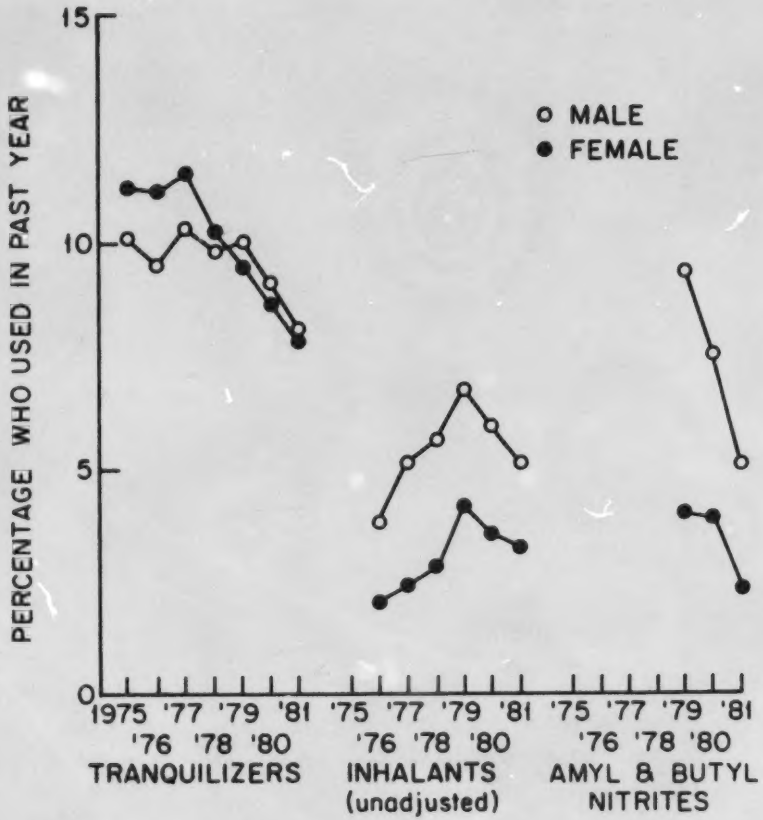
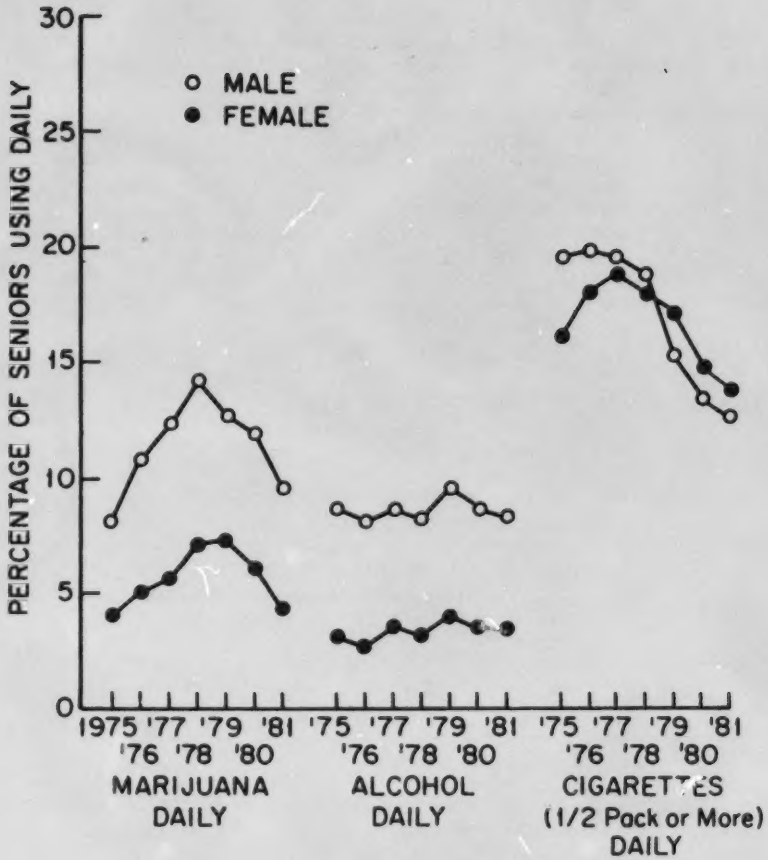


FIGURE F

Trends in Thirty-Day Prevalence of Daily Use of Marijuana, Alcohol, and Cigarettes by Sex



NOTE: Daily use for alcohol and marijuana is defined as use on 20 or more occasions in the past thirty days. Daily use of cigarettes is defined as smoking a half-pack or more per day in the past thirty days.

seniors in 1975 said they had. This proportion rose gradually to 41% by 1979, but has remained perfectly constant since. Thus, to answer a frequently asked question, there is no evidence that the currently observed drop in marijuana use is leading to a concomitant increase in alcohol use.

- As for cigarette use, 1976 and 1977 appear to have been the peak years for lifetime, thirty-day, and daily prevalence. (Annual prevalence is not asked.) Over the last four graduating classes, thirty-day prevalence has been dropping, from 38% in the class of 1977 to 29% in the class of 1981. More importantly, daily cigarette use has dropped over that same interval from 29% to 20%, and daily use of half-pack-a-day or more has fallen from 19.4% to 13.5% between 1977 and 1981 (nearly a one-third decrease). The decline appears to be decelerating, with daily use dropping only 1.0% over just the last year. As with daily marijuana use, it appears that these important shifts in daily smoking rates have been in response to both personal concerns about the health consequences of use, and a perceived peer disapproval of regular use—both of which rose steadily until this year, when they leveled. (See the relevant sections below.) Needless to say, these changes are highly significant from both a substantive and statistical point of view.

Trend Comparisons for Important Subgroups

Sex Differences in Trends

- Most of the sex differences mentioned earlier for individual classes of drugs have remained relatively unchanged over the past five years—that is, any trends in overall use have occurred about equally among males and females, as the trend lines in Figures D and E illustrate. There are however, a few exceptions.

- Since 1977, the small sex difference involving tranquilizer use (men this age had used them less frequently than women) has disappeared, due to a faster decline among females.

- An examination of the trends in the proportion of each sex using any illicit drug (see Figure D) suggests that use has been declining among males since 1978 (from 59% to 54% in 1981) while still increasing slightly among females (from 49% in 1978 to 51% in 1981). However, if amphetamine use is deleted from the statistics (see notations in Figure D) female use peaked in 1979 and then declined as well. (Note that

the declines for both males and females are attributable to the declining marijuana use rates.) Obviously, the recent climb in reported amphetamine use has occurred somewhat more among females. For example, between 1978 and 1981 female amphetamine use (lifetime) rose by 10.3% (from 23.2% to 33.5%) while male use rose by 8.2% (from 22.3% to 30.5%). Nevertheless, even with amphetamines excluded, the decline in illicit drug use among males started earlier and has been sharper than among females.

- Regarding the apparent parity between the sexes in the trends in the use of illicit drugs other than marijuana, it can be seen in Figure D that, when amphetamine use is excluded from the calculations, somewhat differential trends emerge for males vs. females. This is because there are more females today who use only amphetamines and the exclusion of amphetamines from the calculations results in a virtually stable trend line for females in the use of illicits other than marijuana or amphetamines.

- Regarding cigarette smoking, we observed in 1977 that females for the first time caught up to males at the half-a-pack per day smoking level (Figure E). Since 1977, both sexes have shown a decline in the prevalence of such smoking, but use among males dropped more in 1979, resulting in a reversal of the sex differences. This year again, both sexes showed a further drop in half-pack-a-day use, and females still remain slightly higher—13.8% vs. 12.8%. (At less frequent levels of smoking there is a somewhat larger sex difference, since there are more occasional female smokers than occasional male smokers.)

Trend Differences Related to College Plans

- Both college-bound and noncollege-bound students have been showing fairly parallel trends in overall illicit drug use over the last several years (see Figure G).*

- Changes in use of the specific drug classes have also been quite parallel for the two groups since 1976, except for sedatives, cocaine, and inhalants.

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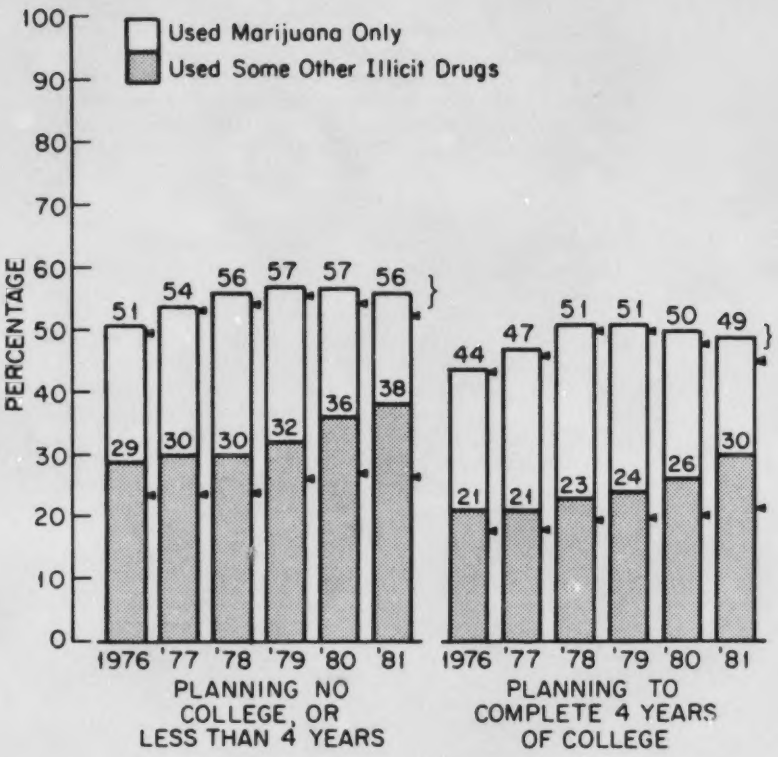
*Because of excessive missing data in 1975 on the variable measuring college plans, group comparisons are not presented for that year.

FIGURE G

Trends in Annual Prevalence of Illicit Drug Use
by College Plans



NOTES: The bracket near the top of a bar indicates the lower and upper limits of the 95% confidence interval.

Use of "some other illicit drugs" includes any use of hallucinogens, cocaine, and heroin, or any use which is not under a doctor's orders of other opiates, stimulants, sedatives, or tranquilizers.

The arrowheads indicate the percentages which result if stimulants are excluded from the definition of "illicit drugs."

- Sedative use rose somewhat between 1978 and 1980 among the noncollege segment, while falling slightly among the college-bound. Looking at the two ingredient subclasses of sedatives, barbiturates and methaqualone, we find that the groups show somewhat differential trends on both. Barbiturate use for both groups dropped some over that period, but only slightly for the noncollege (annual prevalence down 0.1% to a level of 9.0% in 1980) compared to the college-bound (down 2.0% to a level of 4.8%). Over the same interval methaqualone use increased in both groups, but less among the college-bound (up 1.2% to a level of 5.5%) than among the noncollege-bound (up 3.8% to a level of 8.9%). The net result was a considerable divergence in sedative use. This year, however, there was little change and no further divergence.

- On the other hand, there has been some convergence over the past two years in cocaine use, with the noncollege-bound group declining a bit after a rapid rise, while the college-bound continued to rise.

- There has also been a convergence in annual prevalence of inhalant use (unadjusted); both groups showed a decline over the past two years, but the noncollege-bound showed a faster decline.

Regional Differences in Trends

- In terms of the proportion of seniors using any illicit drug during the year, all four regions of the country reached their peaks in 1978 or 1979. The West, however, has not started to decline yet as have the other regions—though when amphetamines are excluded from consideration, a decline shows up even in the West. (See Figure H.)

- The proportion using an illicit drug other than marijuana currently is increasing in three of the four regions. (Only in the South has it been stable for the last year.) As noted elsewhere in this report, a major factor in the rise of illicit drug use other than marijuana has been the rise in reports of amphetamine use. Such a rise appeared in all four regions; however the rise from 1980-1981 was only 2% in the South, whereas in the other regions the percentages all rose by more than 6%.

- When amphetamine use is excluded, as shown by the arrows in Figure H, then a rather different picture apppears for regional trends during the late seventies and early eighties. Use of illicits other than marijuana and amphetamines has started to decline in the South,

and has remained roughly steady in the North Central region. Rates in the West and the Northeast have shown some increase during the past few years.

- Cocaine use is primarily responsible for the above-noted trends in the West and the Northeast. Since 1975 and 1976, when cocaine use in all four regions ranged from 5% to 8%, annual prevalence rates in the West and the Northeast roughly tripled. In the North Central regions these rates had doubled by 1979 and 1980, but declined slightly (1.5%, not statistically significant) in 1981. In the South annual prevalence of cocaine use showed a smaller rise until 1979 and declined thereafter. The 1981 regional difference in cocaine use (e.g., three times as many seniors in the West as in the South reported any use during the past year) are among the most dramatic in this report (see Table 4, also Tables 3 and 5).

- While hallucinogen use (unadjusted for underreporting of PCP) has not changed much in three of the four regions, it has shown a steady and substantial decline in the South since 1975.

Trend Differences Related to Population Density

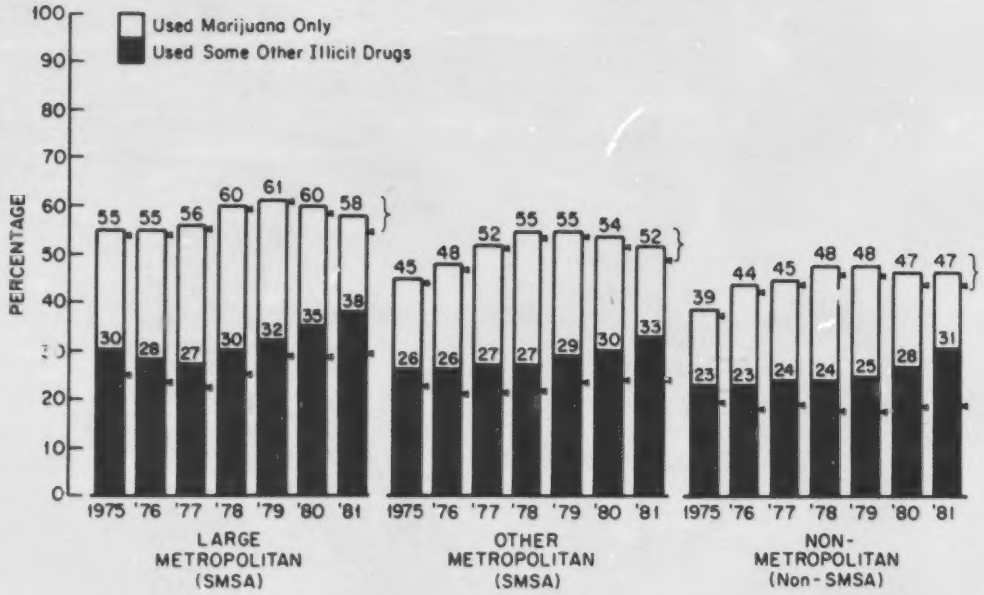
- There now appears to have been a peaking in the proportions using any illicit drug in all three levels of community size (Figure I). Although the smaller metropolitan areas and the non-metropolitan areas never caught up completely with their larger counterparts, they did narrow the gap some between 1975 and 1979. Most of that narrowing was due to changing levels of marijuana use, and most of it occurred prior to 1978.

- However, the proportions reporting the use of some illicit drug other than marijuana have been increasing continuously over the last four years in the very large cities, over the last three years in the smaller metropolitan areas, and over the last three years in the non-metropolitan areas. As can be seen by the special notations in Figure I, almost all of this increase is attributable to the rise in reported amphetamine use (which may be partly artifactual).

- The increase in cocaine use, although dramatic at all levels of urbanicity between 1976 and 1979, was greatest in the large cities. This year, for the first time, there was a slight (but not statistically significant) decline in use in the large cities. Elsewhere, cocaine use has been fairly stable for the last two years.

FIGURE H

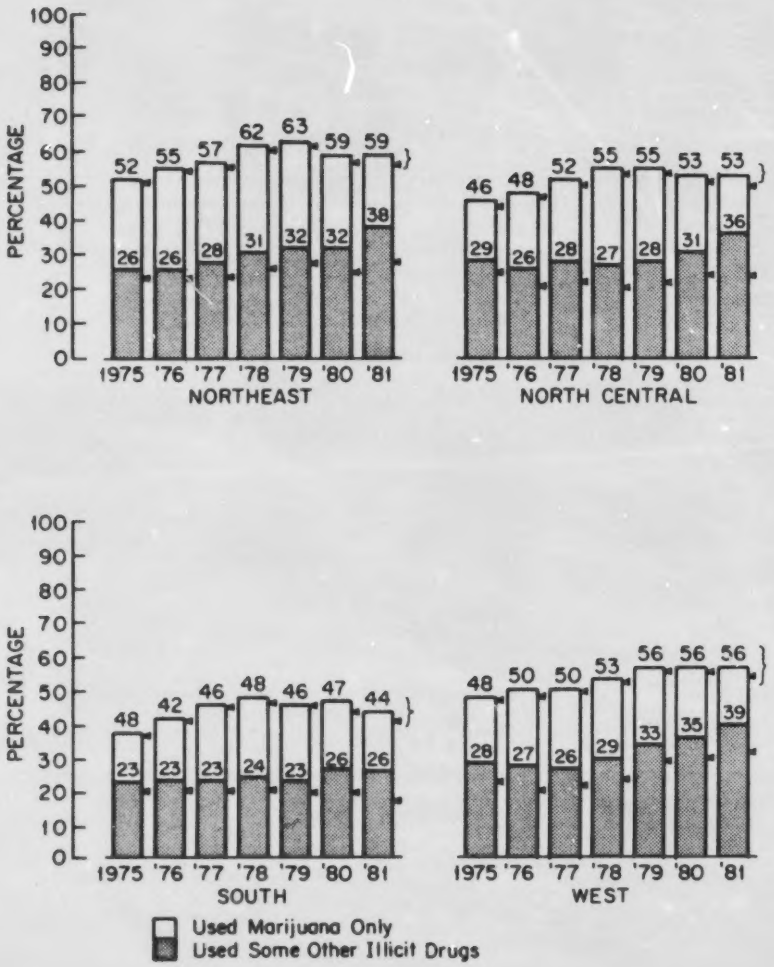
Trends in Annual Prevalence of Illicit Drug Use by Region of the Country



NOTES: See Figure G for relevant footnotes.

FIGURE I

Trends in Annual Prevalence of Illicit Drug Use by Population Density



NOTES: See Figure G for relevant footnotes.

USE AT EARLIER GRADE LEVELS

In two of the five questionnaire forms used in the study, respondents are asked to indicate the grade in which they were enrolled when they first tried each class of drugs. Graphic presentations on a drug-by-drug basis of the trends for earlier grade levels and of the changing age-at-onset curves for the various graduating classes are contained in the large 1978 and 1982 reports from the study (cited earlier). For the purposes of these highlights, only some of these figures are included. Table 10 gives the percent of the 1981 seniors who first tried each drug at each of the earlier grade levels.

Grade Level at First Use

- Initial experimentation with most illicit drugs occurs during the final three years of high school. Each illegal drug, except marijuana, had been used by no more than 7% of the class of 1981 by the time they entered tenth grade. (See Table 10.)

- However, for marijuana, alcohol, and cigarettes, most of the initial experiences took place before high school. For example, daily cigarette smoking was begun by 15% prior to tenth grade vs. only an additional 9% in high school (i.e., in grades ten through twelve). The figures for initial use of alcohol are 56% prior to and 36% during high school; and for marijuana, 34% prior to and 25% during high school.

- Among inhalant users (unadjusted for nitrite underreporting), over half had their first experience prior to tenth grade. However, this unadjusted statistic probably reflects the predominant pattern for such inhalants as glues and aerosols, which tend to be used primarily at younger ages. We know that the underreporting of use of amyl and butyl nitrites in this category yields an understatement of the number of students who initiated inhalant use in the upper grade levels. This is apparent from age-at-first-use statistics for this subclass in Table 10.

TABLE 10

Grade of First Use for Sixteen Types of Drugs, Class of 1981

Grade in which drug was first used:	Marijuana	Inhalants[a]	Amyl / Butyl Nitrites	Hallucinogens[a]	LSD	PCP	Cocaine	Heroin	Other Opiates	Stimulants	Sedatives	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Cigarettes (Daily)
6th	2.2	1.7	0.1	0.1	0.1	0.2	0.1	0.0	0.5	0.4	0.1	0.2	0.1	0.3	9.0	2.9
7-8th	14.0	2.5	1.1	1.0	0.5	1.0	0.4	0.1	0.7	1.7	0.9	0.9	0.5	1.4	23.2	6.9
9th	17.9	2.8	2.7	2.4	1.7	2.4	1.7	0.3	1.6	4.3	3.0	2.6	1.5	3.4	24.1	5.2
10th	13.2	2.0	3.1	3.7	3.0	2.3	4.0	0.1	2.2	8.6	4.3	3.4	2.6	3.9	18.8	4.5
11th	8.1	1.7	1.8	3.8	2.7	1.5	6.1	0.3	3.2	9.9	4.8	3.1	3.7	3.8	11.8	3.1
12th	4.0	1.7	1.2	2.2	1.7	0.4	4.2	0.3	1.8	7.2	2.8	1.2	2.2	1.9	5.7	1.5
Never used	40.5	87.7	89.9	86.7	90.2	92.2	83.5	98.9	89.9	67.8	84.0	88.7	89.4	85.3	7.4	75.9

NOTE: This question was asked in two of the five forms (N = approximately 7000), except for inhalants, PCP, and the nitrites which were asked about in only one form (N = approximately 3500).

[a]Unadjusted for known underreporting of certain drugs. See page 16.

- PCP use shows a relatively early age of initiation as well, with about 45% of the eventual users having started before high school. But the reasons may be different than for inhalants. Because PCP use has declined in popularity so rapidly in the last two years, it is possible that, for the class of 1981, use in upper grade levels was suppressed from what it would have been had there been relatively no change in popularity. (In the class of 1980, for example, only one-third of all eventual users started before high school.) Put another way, the observed profile of initiation across age likely reflects more of a sharp secular trend than any enduring maturational pattern which would be found consistently across different cohorts.

- For each illicit drug except inhalants and marijuana, less than half of the users had begun use prior to tenth grade. Among those who had used cocaine by senior year, less than one in seven had used prior to tenth grade. For most of the other illicit drugs, the corresponding proportion is roughly from one-fifth to one-third. These data do indicate, however, that significant minorities of eventual users of these drugs are initiated into illicit drug use prior to tenth grade.

Trends in Use at Earlier Grade Levels

- Using the retrospective data provided by members of each senior class concerning their grade at first use, it is possible to reconstruct lifetime prevalence curves at lower grade levels during the years when each class was at various grade levels. Obviously, data from eventual dropouts from school are not included in any of the curves. Figures J-1 through J-17 show the reconstructed lifetime prevalence curves for earlier grade levels for a number of drugs.

- Figure J-1 provides the trends at each grade level for lifetime use of any illicit drug. It shows that for all grade levels above sixth grade there was a continuous increase in illicit drug involvement through the seventies. Note that the line for 6th grade is quite flat; only 1% of the class of 1975 reported having used an illicit drug before 6th grade (which was in 1969 for that class), and the corresponding figure for the class of 1981 is 3% (which was in 1975 for that class). The lines for the other grade levels all show upward slopes, indicating that, for all grade levels above the sixth, more recent classes had initiated more illicit drug use than the less recent classes. For example, 37% of the class of 1975 had used some illicit drug prior to grade 10, compared to 51% of the class of 1981.

- Most of the increase in any illicit drug use was due to increasing proportions using marijuana. We know this from the results in Figure J-2 showing trends for each grade level in the proportion having used any illicit drug other than marijuana in their lifetime. These trend lines are relatively flat throughout the seventies and, if anything, began to taper off among ninth and tenth grade between 1975 and 1977. The biggest cause of the increases from 1978 onward is the rise in reports of amphetamine use. As noted earlier, we suspect that at least some of this rise is artifactual.

- As can be seen in Figure J-3, for the years covered across the decade of the 70's, marijuana use had been rising steadily at all grade levels down through eighth grade. However, the trend lines for all grade levels show a decelerating curve, suggesting they all may have reached an asymptote by the end of the seventies, as we know to be the case for 12th graders. Importantly, there appears to have been little ripple effect in marijuana use down to the elementary schools, through 1975. The two most recent national household surveys by NIDA would suggest that this continues to be true: the proportion of 12 to 13 year olds reporting any experience with marijuana was 6% in 1971, 8% in 1977, and 8% in 1979. Presumably sixth graders would have even lower absolute rates since the average age for sixth graders is less than twelve.*

- Cocaine use (Figure J-4) presents a somewhat less even picture, perhaps because the scale has been magnified to show the smaller percentages. In spite of the unevenness, two clear contrasts to the marijuana pattern may be drawn. First, there is as yet no indication that the curves reach an asymptote by the end of the seventies. Second, most initiation into cocaine use takes place in the last two years of high school (rather than earlier, as is the case for marijuana).

- The lifetime prevalence statistics for stimulants peaked briefly for grade levels 9 through 12 during the mid 70's. (See Figure J-5.) However, it appears to be rising again in the late 70's, at least in the upper grades (for which we have sufficiently recent data). As has been stated repeatedly, some of this recent upturn may be artifactual.

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*See National Survey on Drug Abuse: Main Findings 1979 by P.M. Fishburne, H.I. Abelson, and I. Cisin. Rockville, Md: National Institute on Drug Abuse, 1980.

- Lifetime prevalence of hallucinogen use (unadjusted for underreporting of PCP) began declining among students at most grade levels in the mid 1970's, though it appears that a leveling and possibly some reversal has now taken place, due almost entirely to the trends in LSD use (see Figure J-6). (The trend curves for LSD are extremely similar in shape, though lower in level, of course.)

- While there is relatively little trend data for PCP, since questions about grade of first use were added only a year ago, some interesting results emerge. From the rather checkered data available, it appears that the sharp downturn began right after 1979 (see Figure J-7).

- While questions about age at first use for inhalants (unadjusted for the nitrites) have been asked only since 1978, the retrospective trend curves (Figure J-8) suggest that such inhalant use also was dropping for most grade levels during the mid to late seventies. Since grade-at-first-use data have been gathered for the nitrites beginning in 1979, only a few pieces of retrospective trend lines can be constructed (Figure J-9). These suggest that the decline in use did not begin until 1979.

- Figure J-10 shows that the lifetime prevalence of sedative use, like stimulant use, began declining for all grade levels in the mid 70's. (Recall that annual prevalence observed for seniors had been declining steadily from 1975 to 1979.) As the graphs for the two subclasses of sedatives—barbiturates and methaqualone—show, the trend lines have been different for them at earlier grade levels as well as in twelfth grade (see Figures J-11 and J-12). Since about 1974 or 1975, lifetime prevalence of barbiturate use had fallen off sharply at all grade levels for all classes until the class of 1981. The class of '81 shows some reversal of this pattern at all grade levels. Methaqualone use started to fall off at about the same time as barbiturate use in the lower grade levels, but dropped rather little and then flattened. In more recent years, there has been an increase in use—at least in the upper grades, for which we have the more recent data.

- Lifetime prevalence of tranquilizer use (Figure J-13) also began to decline at all earlier grade levels between 1975 and 1977, and overall it would appear that the tranquilizer trend lines have been following a similar, but slightly lagged, course to that of sedatives. So far, the curves are different only in that tranquilizer use has continued to decline among twelfth graders, while sedative use has not.

- Though a little difficult to see, the heroin lifetime prevalence figures for grades 9 through 12 all began declining in the mid 1970's, have since leveled, and show no evidence of reversal as yet (Figure J-14). The lifetime prevalence of use of opiates other than heroin appears to have remained quite flat at all grade levels since the mid-seventies (Figure J-15).

- Figure J-16 presents the lifetime prevalence curves for cigarette smoking on a daily basis. It shows dramatically that initiation to daily smoking was beginning to peak at the lower grade levels in the mid 1970's. This peaking did not become apparent among high school seniors until later in the 70's. In essence, these changes reflect in part cohort effects—changes which show up consistently across the age band for certain class cohorts. Because of the highly addictive nature of nicotine, this is a type of drug-using behavior in which one would expect to observe enduring differences between cohorts if any are observed at a formative age.

- The comparable curves for lifetime prevalence of alcohol use at earlier grade levels (Figure J-17) are very flat, suggesting that very little change in initiating rates took place at earlier grade levels across the years covered. Recall, however, that among seniors some modest increase in the drinking of a large quantity of alcohol on occasion did occur between 1975 and 1979. It is possible that similar shifts took place in lower grade levels, as well.

FIGURE J-1

Use of Any Illicit Drug: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

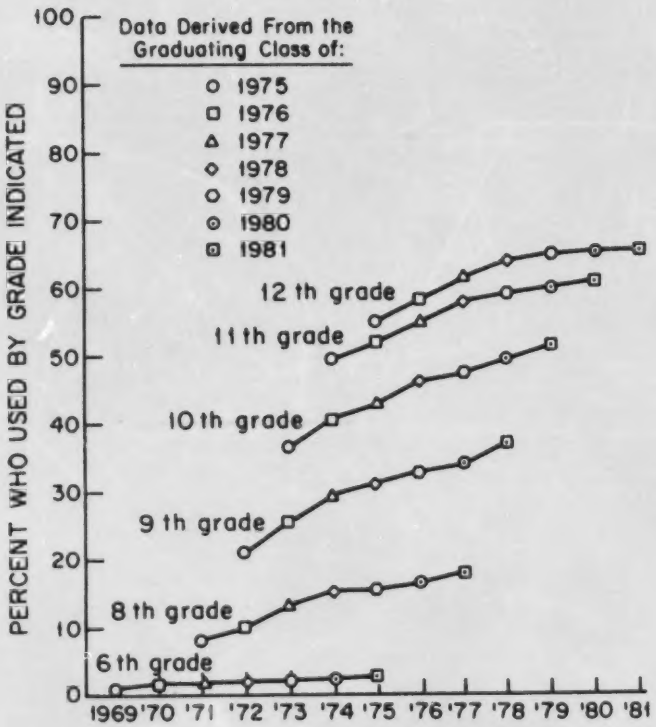

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FIGURE 3-2

Use of Any Illicit Drug Other Than Marijuana: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

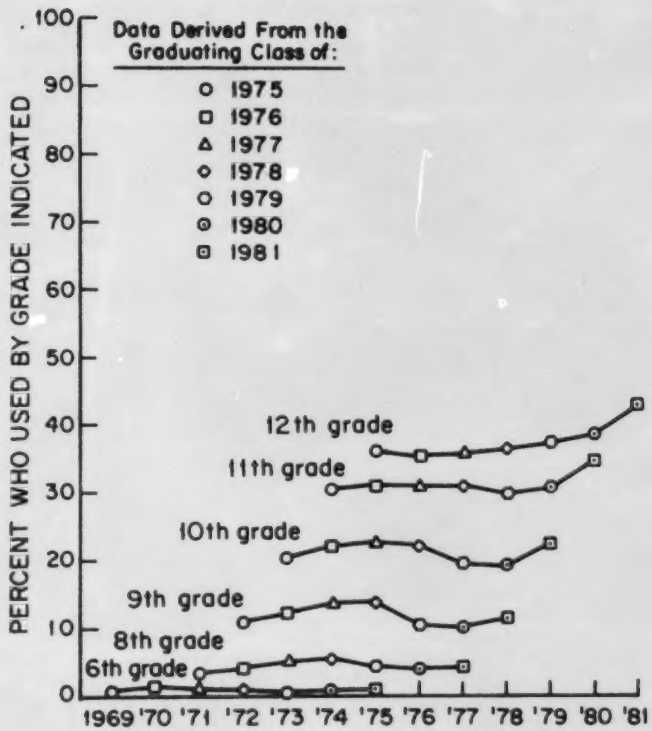

FIGURE 3-3

Marijuana: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors

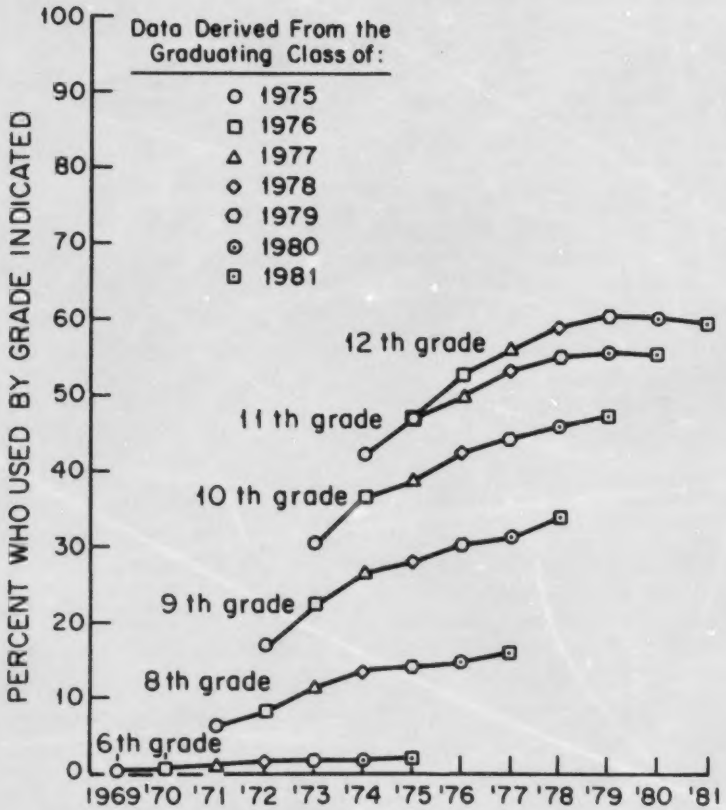

FIGURE J-4

Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors

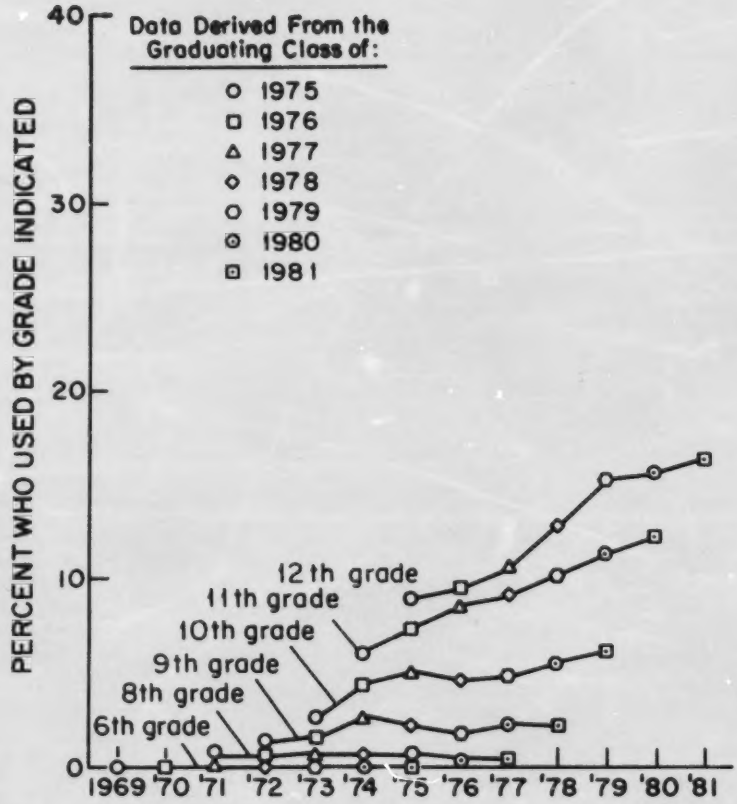

FIGURE 3-5

Stimulants: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors

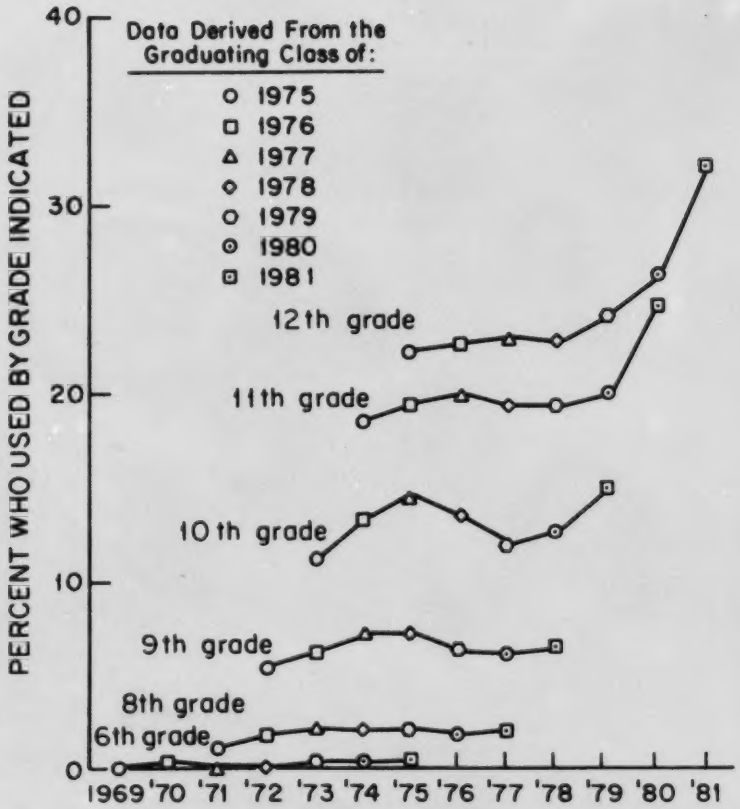

FIGURE 3-6

Hallucinogens: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

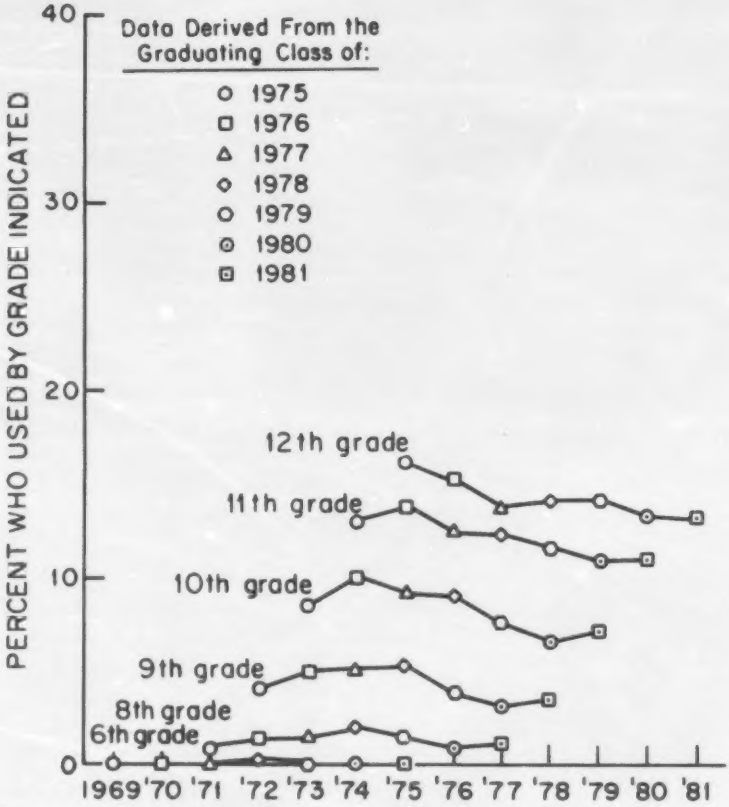

FIGURE J-7

PCP: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors

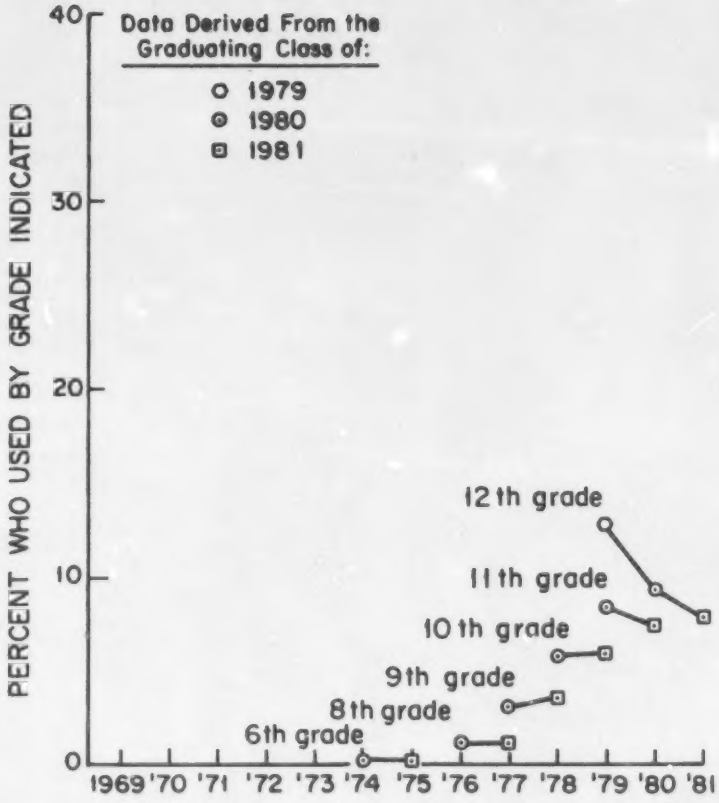

FIGURE J-8

Inhalants: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

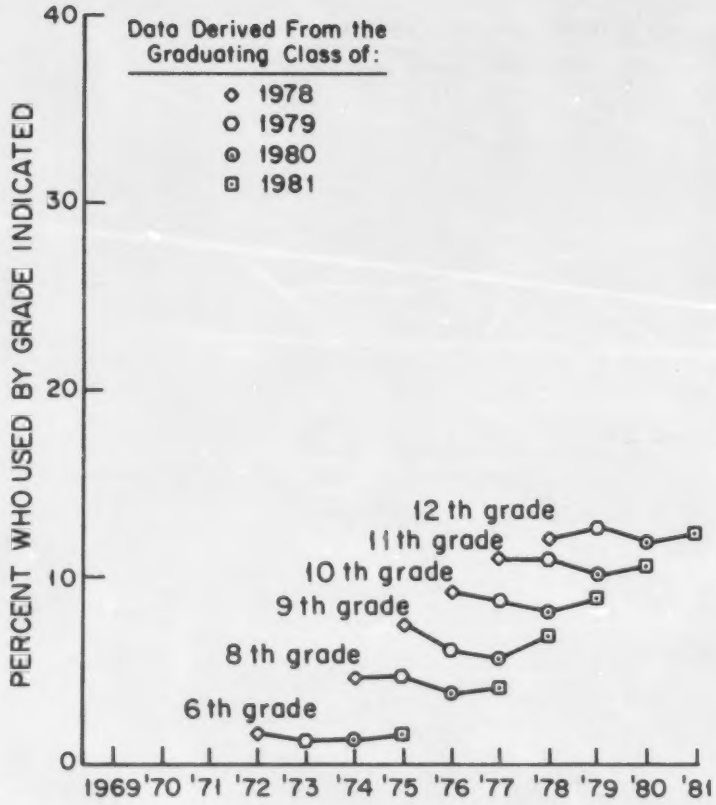

FIGURE J-9

Nitrites: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

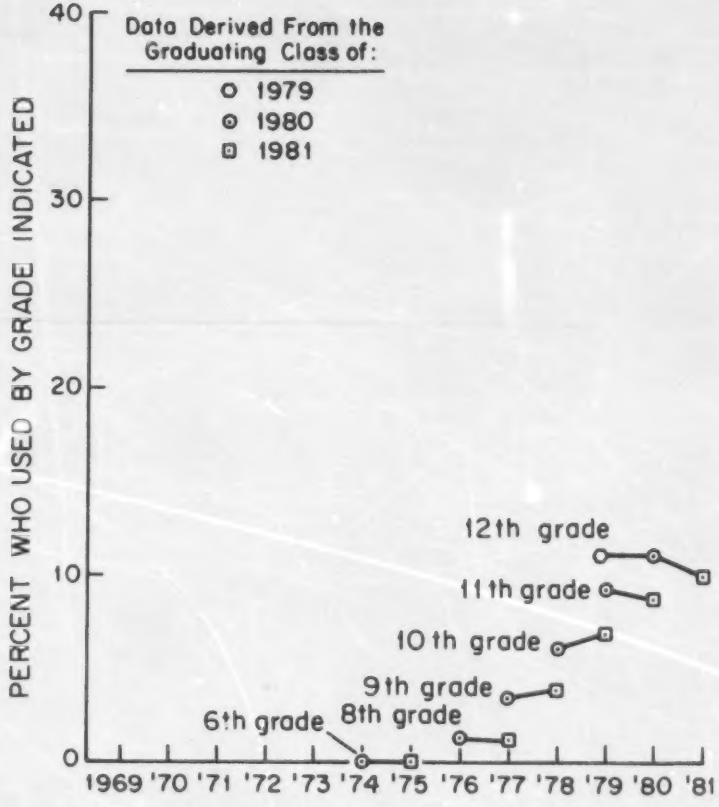

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FIGURE J-10

Sedatives: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors

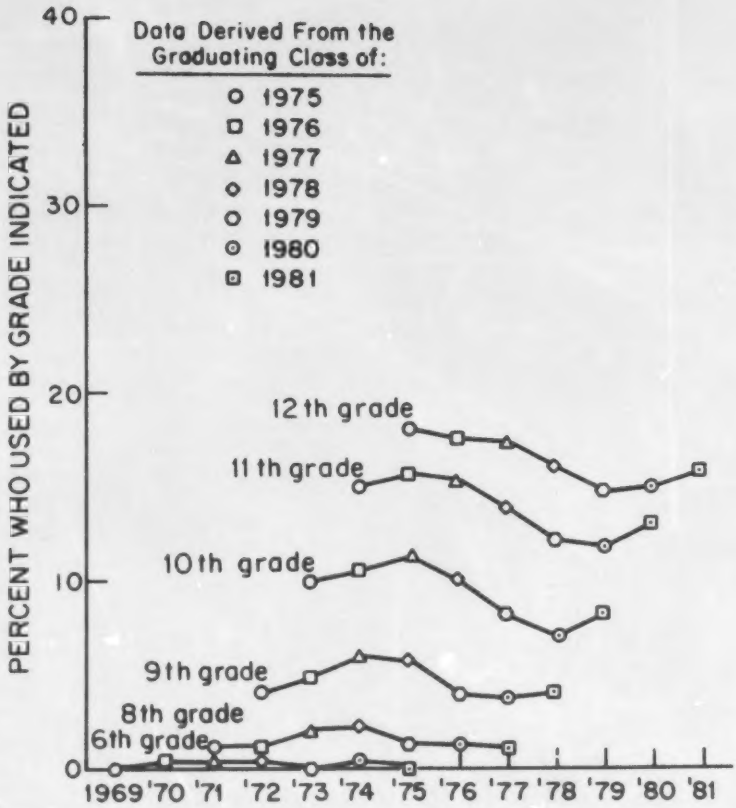


FIGURE J-11

Barbiturates: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

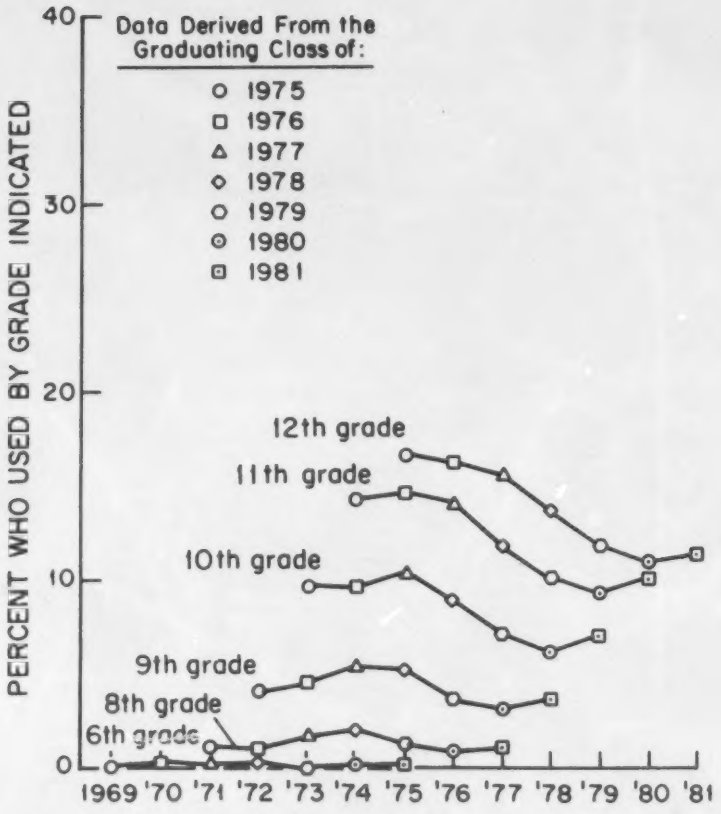


FIGURE J-12

Methaqualone: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors

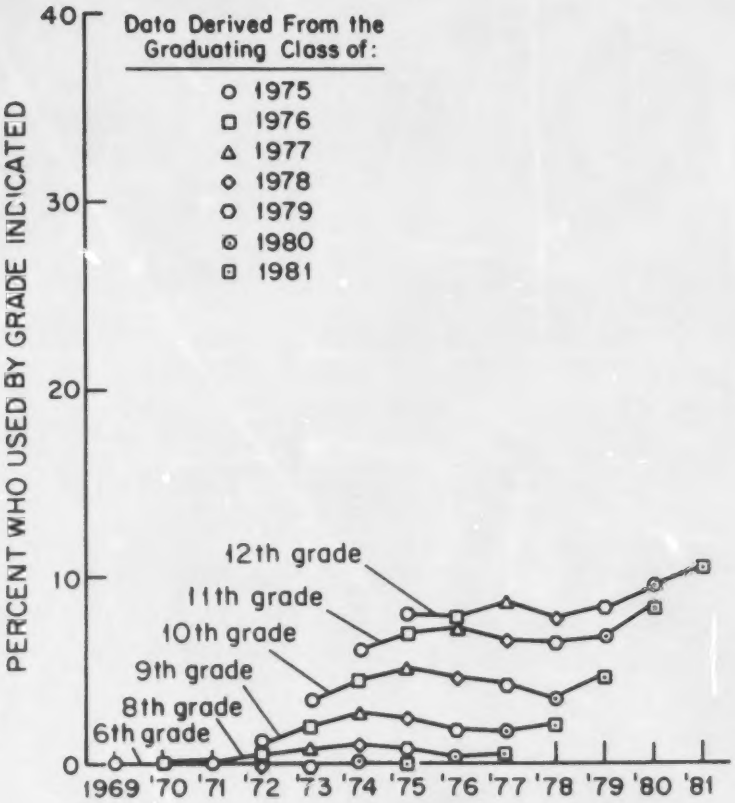


FIGURE J-13

Tranquilizers: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

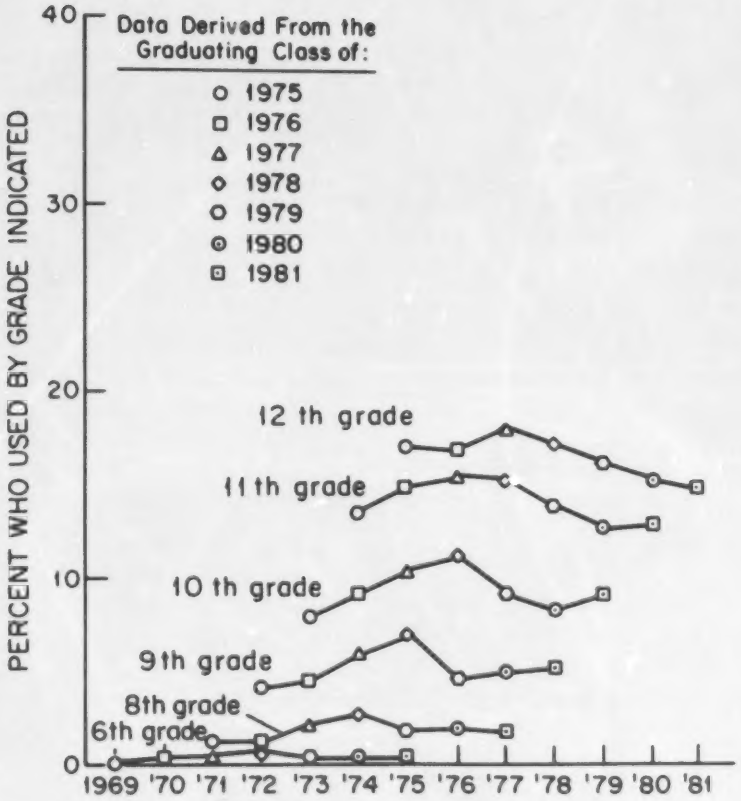


FIGURE 3-14

Heroin: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

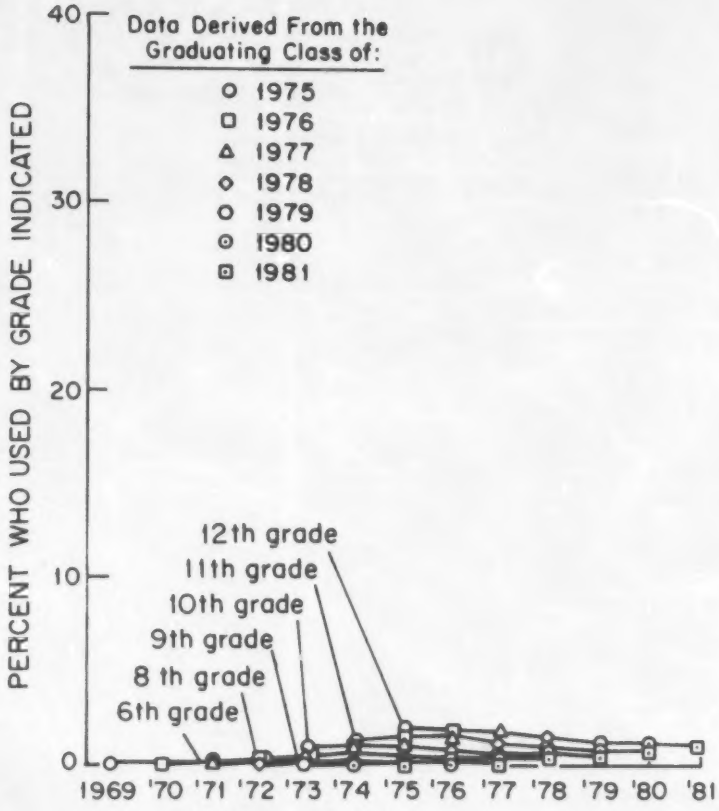


FIGURE J-15

Other Opiates: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors

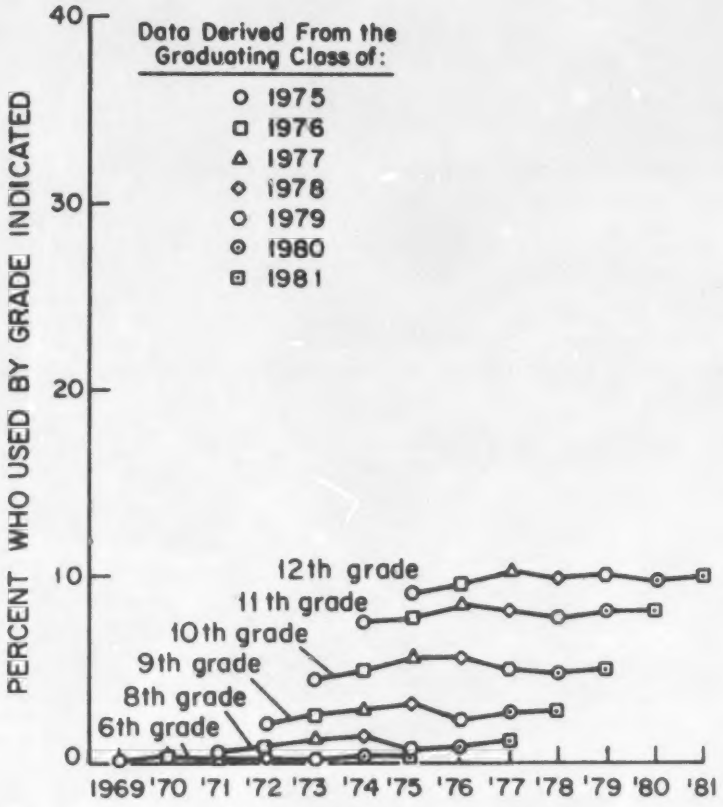


FIGURE J-16

Cigarettes: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Seniors

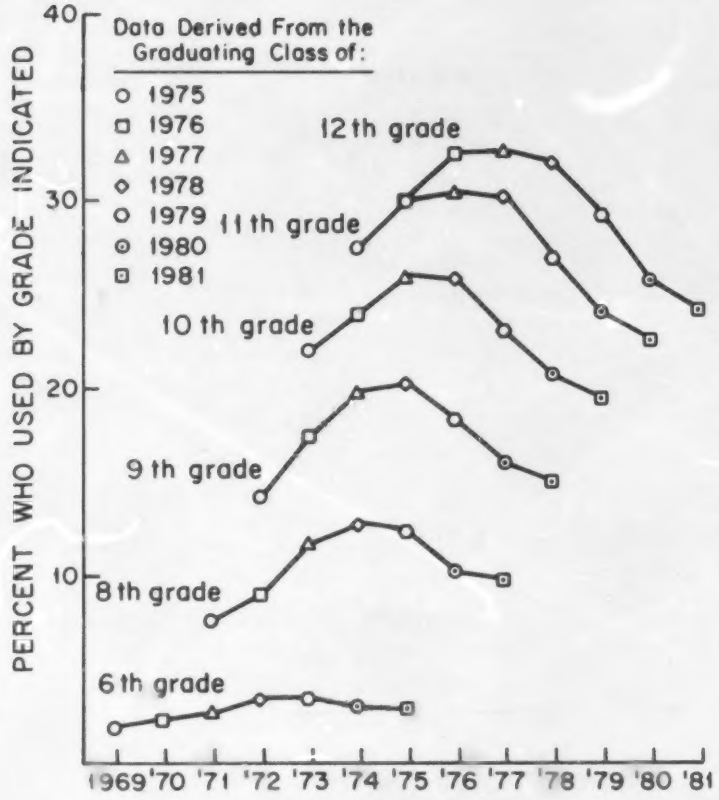
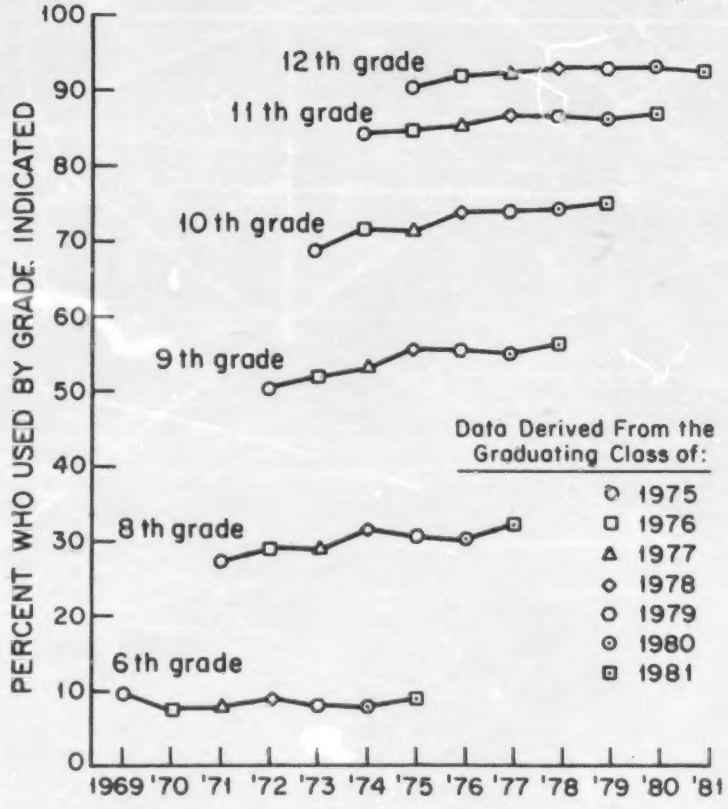


FIGURE J-17

Alcohol: Trends in Lifetime Prevalence for Earlier Grade Levels Based on Retrospective Reports from Seniors



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DEGREE AND DURATION OF HIGHS

On one of the five questionnaire forms, seniors who report use of a drug during the prior twelve months are asked how long they usually stay high and how high they usually get on that drug. These measures were developed both to help characterize the drug-using event and to provide indirect measures of dose or quantity of drugs consumed.

- Figure K shows the proportion of 1981 seniors who say that they usually get "not at all" high, "a little" high, "moderately" high, or "very" high when they use a given type of drug. The percentages are based on all respondents who report use of the given drug class in the previous twelve months, and therefore each bar cumulates to 100%. The ordering from left to right is based on the percentage of users of each drug who report that they usually get "very" high. (The width of each bar is proportional to the percentage of all seniors having used the drug class in the previous year; this should serve as a reminder that even though a large percentage of users of a drug may get very high, they may represent only a small proportion of all seniors.)

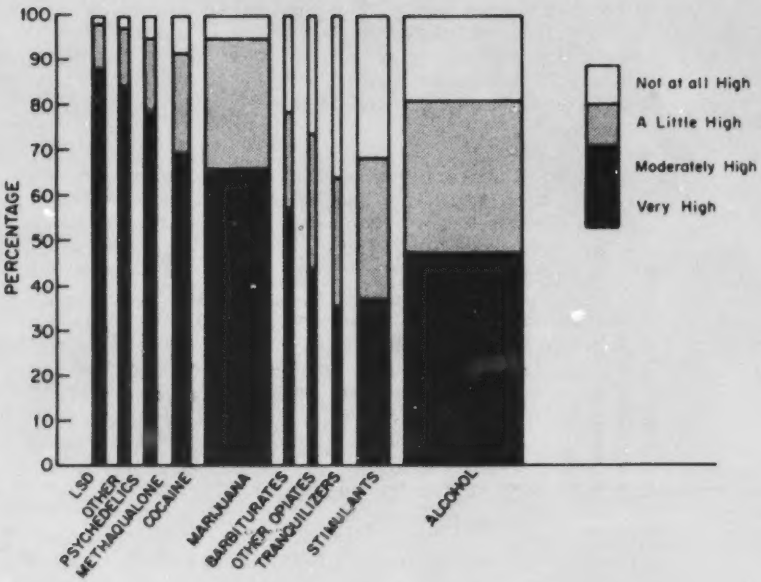
- The drugs which usually result in intense highs are the hallucinogens (LSD and other hallucinogens), heroin and methaqualone (Quaaludes). (Actually, heroin has been omitted from Figure K because of the small number of cases available for a given year, but an averaging across years indicates that it would rank very close to LSD.)

- Next come cocaine and marijuana, with about two-thirds of the users of each saying they usually get moderately high or very high when using the drug.

- The four major psychotherapeutic drug classes—barbiturates, opiates other than heroin, tranquilizers and stimulants—are less often used to get high; but

FIGURE K

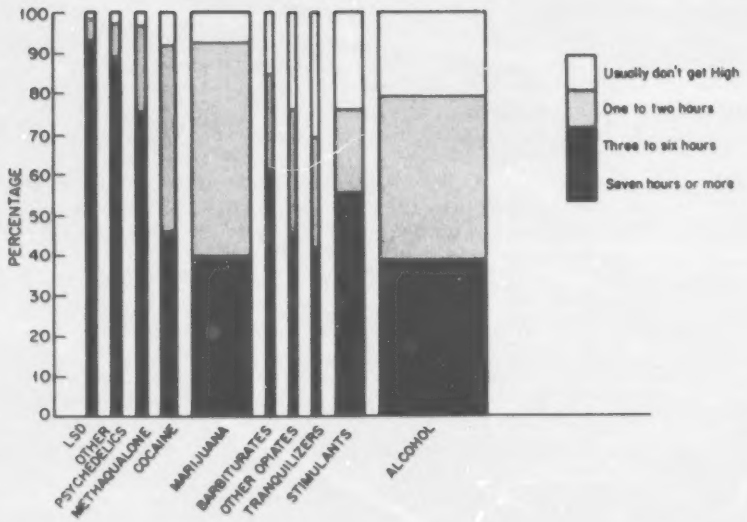
Degree of High Attained by Recent Users



NOTE: Heroin has been omitted from this figure because of the small number of heroin users who received these particular questions. The width of each bar is proportionate to the number of seniors reporting any use of each drug in the prior 12 months.

FIGURE L

Duration of High Attained by Recent Users



NOTE: Heroin has been omitted from this figure because of the small number of heroin users who received these particular questions. The width of each bar is proportionate to the number of seniors reporting any use of each drug in the prior 12 months.

substantial proportions of users (from 35% to 57%) still say they usually get moderately or very high after taking these drugs.

- Relatively few of the many seniors using alcohol say that they usually get very high when drinking, although nearly half usually get at least moderately high. However, for a given individual we would expect more variability from occasion to occasion in the degree of intoxication achieved with alcohol than with most of the other drugs. Therefore, many drinkers surely get very high at least sometimes, even if that is not "usually" the case.

- Figure L presents the data on the duration of the highs usually obtained by users of each class of drugs. The drugs are arranged in the same order as for intensity of highs to permit an examination of the amount of correspondence between the degree and duration of highs.

- As can be seen in Figure L, those drugs which result in the most intense highs generally tend to result in the longest highs. For example, LSD, other hallucinogens, and methaqualone rank one through three respectively on both dimensions, with substantial proportions (from 20% to 60%) of the users of these drugs saying they usually stay high for seven hours or more. And alcohol ranks last on both dimensions; most users stay high for two hours or less.

- However, there is not a perfect correspondence between degree and duration of highs. The highs achieved with marijuana, although intense for many users, tend to be relatively short-lived in comparison with most other drugs. The majority of users usually stay high less than three hours, and the modal and median time is one to two hours.

- For cocaine users the modal high is one to two hours, though nearly as many stay high three to six hours. Longer highs are reported by 12%.

- The modal and median duration of highs for barbiturates and stimulants are three to six hours. Users of opiates other than heroin and tranquilizers report highs of slightly shorter duration.

- In sum, the drugs vary considerably in both the duration and degree of the highs usually obtained with them. (These data obviously do not address the qualitative differences in the experiences of being "high.") Sizeable proportions of the users of all of

these drugs report that they usually get high for at least three hours per occasion, and for a number of drugs appreciable proportions usually stay high for seven hours or more.

Trends in Degree and Duration of Highs

- There have been several important shifts over the last five years in the degree or duration of highs usually experienced by users of the various drugs.

- The average duration of the highs reported by LSD users seems to have declined somewhat. In 1975, 74% of the recent LSD users reported usually staying high seven hours or more; by 1981 this proportion had dropped to 58%. The subjectively reported degree of high usually obtained has also dropped, from 79% of users saying "very high" in 1975 to 66% of users in 1981.

- For cocaine, the proportion who say they usually get high for only two hours or less has increased from 35% in 1977 to 54% in 1981, reflecting a substantial shortening in the average duration of highs. There has also been some modest decline in the average degree of high attained.

- For opiates other than heroin, there had been a fairly steady decline between 1975 and 1981 in both the intensity of the highs usually experienced and in the duration of those highs. In 1975, 39% said they usually got "very high" vs. 15% in 1981. The proportion usually staying high for seven or more hours dropped from 28% in 1975 to 12% in 1981.

- Stimulants have shown a substantial decrease in the proportion usually getting very high or moderately high (from 60% in 1975 to 37% in 1981). Consistent with this, the proportion of users saying they simply "don't take them to get high" increased from 9% in 1975 to 20% by 1981. Also, the average reported duration of stimulant highs has been declining; 41% of the 1975 users said they usually stayed high seven or more hours vs. 17% of the 1981 users. These substantial decreases in both the degree and the duration of highs strongly suggest that there has been some shift in the purposes for which "amphetamines" are being used. An examination of data on self-reported reasons for use tends to confirm this conclusion. The proportion of all seniors who reported both using amphetamines in the prior year and checking "to stay awake" as one of their reasons for use, has risen gradually since 1976 and then

more sharply last year (up from 8% in 1976 to 11% in 1980 to 14% in 1981). There was also a similar pattern of increase in the proportion of all seniors who used in the past year and checked "to lose weight" as one of their reasons (up from 4% in 1976 to 7% in 1980 to 10% in 1981); as well as a similar pattern for the proportion who checked "to get more energy" (8% in 1976 to 11% in 1980 to 15% in 1981). Thus there has been a distinct increase in the use of "amphetamines" for these non-recreational purposes; and, in fact, these reasons are among the most cited of all sixteen reasons which might have been checked.

There also, however, appears to have been some increase in recreational use as well, though not as steep a one as the trends in overall use might suggest. "To get high" was reported by the following proportions of all seniors as a reason for using amphetamines in the prior year: 9% in 1976, 9% in 1980, and 11% in 1981. "To have a good time with my friends" was reported by 5% in 1976, 6% in 1980, and 7% in 1981. These data, then, suggest that there has been some increase since 1980 in the recreational use of amphetamines.

- There is some evidence in the last two years that the degree and duration of highs usually achieved by barbiturate users and methaqualone users has been decreasing. The largest change has been in the duration of methaqualone highs, which dropped sharply in the last two years.

- For marijuana there has been some downward trending since 1978 in the degree of the highs usually obtained. In 1978, 27% of users said they usually get "very high"—a figure which dropped to 20% by 1981. There have also been some interesting changes taking place in the duration figures. Recall that most marijuana users say they usually stay high either one to two hours or three to six hours. Since 1975 there has been a steady shift in the proportions selecting each of these two categories: a lower proportion of recent users answered three to six hours in 1981 (36% vs. 45% in 1975) while a higher proportion answered one to two hours in 1981 (53% vs. 40% in 1975). Until 1979 this shift could have been due almost entirely to the fact that progressively more seniors were using marijuana; and the users in more recent classes, who would not have been users in earlier classes, probably tended to be relatively light users. We deduce this from the fact the percentage of all seniors reporting three-to-six-hour highs remained relatively unchanged from 1975 to 1979, while the percentage of all seniors reporting only

one to two hour highs had been increasing steadily (from 16% in 1975 to 25% in 1979).

However, the overall prevalence rate did not increase over the past two years (annual prevalence actually dropped by 5%), but the shift toward shorter average highs continued. Thus we must attribute this recent shift to another factor, and the one which seems most likely is a general shift (even among the most marijuana-prone segment) toward a less frequent (or less intense) use of the drug. The drop in daily prevalence, over the last two years, which is disproportionate to the drop in overall prevalence, is consistent with this interpretation.

In sum, not only are fewer high school students now using marijuana, but those who are using seem to be using less frequently and to be taking smaller doses per occasion.

- For hallucinogens other than LSD, taken as a class, there has been a gradual decline in the degree, though not the duration, of high usually experienced.

- There are no clearly discernible patterns in the intensity or duration of the highs being experienced with the remaining classes of drugs on which we have the relevant data—i.e., tranquilizers, and alcohol. (Data have not been collected for highs experienced in the use of inhalants, the nitrites specifically, or PCP specifically; and the number of admitted heroin users on a single questionnaire form is inadequate to estimate trends reliably.)

ATTITUDES AND BELIEFS ABOUT DRUGS

This section presents the cross-time results for three sets of attitude and belief questions. One set concerns how harmful the students think various kinds of drug use would be for the user, the second concerns how much they personally disapprove of various kinds of drug use, and the third asks about attitudes on the legality of using various drugs under different conditions. (The next section deals with the closely related topics of parents' and friends' attitudes about drugs, as the seniors perceive them.)

As the data below show, overall percentages disapproving various drugs, and the percentages believing their use to involve serious risk, both tend to parallel the percentages of actual users. Thus, for example, of the illicit drugs marijuana is the most frequently used and the least likely to be seen as risky to use. This and many other such parallels suggest that the individuals who use a drug are less likely to disapprove use of it or to view its use as involving risk. However, such a comparison of overall percentages, though strongly suggestive, does not establish that a comparable relationship exists at the individual level. Therefore, an extensive series of individual-level analyses of these data was conducted, and the results confirm that strong correlations exist between individual use of drugs and the various attitudes and beliefs about those drugs. Those seniors who use a given drug also are more likely to approve its use, downplay its risks, and report their own parents and friends as being at least somewhat more accepting of its use.

The attitudes and beliefs about drug use reported below have been changing during recent years, along with actual behavior. In particular, views about marijuana use, and legal sanctions against use, have shown important trends. A number of states have enacted legislation which in essence removes criminal penalties for marijuana use, others have such legislation pending, one (Alaska) has had certain types of use "decriminalized" by judicial decision, and the Carter administration recommended Federal decriminalization. Certainly such events, and also the positions taken by the National Commission on Marijuana and Drug Abuse, the American Bar Association, the American Medical Association, and Consumers Union, likely had an effect on public attitudes, particularly regarding decriminalization. Our trend data suggest that they did.

More recently, scientists, policy makers, and in particular the electronic and printed media, have given considerable attention to the increasing levels of regular marijuana use among young people, and to the potential hazards associated with such use. As will be seen below, over the last three years attitudes about regular use of marijuana have shifted dramatically in a more conservative direction—a shift which coincides with a reversal in the previous rapid rise of daily use, and which very likely reflects the impact of this increased public attention.

Perceived Harmfulness of Drugs

Beliefs in 1981 about Harmfulness

- A substantial majority of high school seniors perceive regular use of any of the illicit drugs, other than marijuana, as entailing "great risk" of harm for the user (see Table 11). Some 88% of the sample feel this way about heroin—the highest proportion for any of these drugs—while 84% associate great risk with using LSD. The proportions attributing great risk to amphetamines, barbiturates, and cocaine are all around 70%.

- Regular use of cigarettes (i.e., one or more packs a day) is judged by the majority (63%) as entailing a great risk of harm for the user.

- Regular use of marijuana is judged to involve great risk by 58% of the sample, only slightly fewer than judge cigarette smoking to involve great risk.

- Regular use of alcohol was more explicitly defined in several questions. Very few (22%) associate much risk of harm with having one or two drinks almost daily. Only about a third (36%) think there is great risk involved in having five or more drinks once or twice each weekend. Considerably more (65%) think the user takes a great risk in consuming four or five drinks nearly every day, as would be expected.

- Compared with the above perceptions about the risks of regular use of each drug, many fewer respondents feel that a person runs a "great risk" of harm by simply trying the drug once or twice.

- Very few think there is much risk in using marijuana experimentally (13%) or even occasionally (19%).

- Experimental use of the other illicit drugs, however, is still viewed as risky by a substantial proportion. The percentage associating great risk with experimental

TABLE 11

Trends in Perceived Harmfulness of Drugs

Q. How much do you think people risk harming themselves (physically or in other ways), if they. . .	Percent saying "great risk"[a]							
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Try marijuana once or twice	15.1	11.4	9.5	8.1	9.4	10.0	13.0	+3.0ss
Smoke marijuana occasionally	18.1	15.0	13.4	12.4	13.5	14.7	19.1	+4.4sss
Smoke marijuana regularly	43.3	38.6	36.4	34.9	42.0	50.4	57.6	+7.2sss
Try LSD once or twice	49.4	45.7	43.2	42.7	41.6	43.9	45.5	+1.6
Take LSD regularly	81.4	80.8	79.1	81.1	82.4	83.0	83.5	+0.5
Try cocaine once or twice	42.6	39.1	35.6	33.2	31.5	31.3	32.1	+0.8
Take cocaine regularly	73.1	72.3	68.2	68.2	69.5	69.2	71.2	+2.0
Try heroin once or twice	60.1	58.9	55.8	52.9	50.4	52.1	52.9	+0.8
Take heroin occasionally	75.6	75.6	71.9	71.4	70.9	70.9	72.2	+1.3
Take heroin regularly	87.2	88.6	86.1	86.6	87 5	86.2	87.5	+1.3
Try amphetamines once or twice	35.4	33.4	30.8	29.9	29.7	29.7	26.4	-3.3s
Take amphetamines regularly	69.0	67.3	66.6	67.1	69.9	69.1	66.1	-3.0s
Try a barbiturate once or twice	34.8	32.5	31.2	31.3	30.7	30.9	28.4	-2.5
Take barbiturates regularly	69.1	67.7	68.6	68.4	71.6	72.2	69.9	-2.3
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	5.3	4.8	4.1	3.4	4.1	3.8	4.6	+0.8
Take one or two drinks nearly every day	21.5	21.2	18.5	19.6	22.6	20.3	21.6	+1.3
Take four or five drinks nearly every day	63.5	61.0	62.9	63.1	66.2	65.7	64.5	-1.2
Have five or more drinks once or twice each weekend	37.8	37.0	34.7	34.5	34.9	35.9	36.3	+0.4
Smoke one or more packs of cigarettes per day	51.3	56.4	58.4	59.0	63.0	63.7	63.3	-0.4
N =	(2804)	(3225)	(3570)	(3770)	(3250)	(3234)	(3604)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

[a]Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, Drug unfamiliar.

use ranges from about 26% for amphetamines and barbiturates to 53% for heroin.

- Practically no one (5%) believes there is much risk involved in trying an alcoholic beverage once or twice.

Trends in Perceived Harmfulness

- Several very important trends have been taking place over the last five years in these beliefs about the dangers associated with using various drugs (see Table 11 and Figures M and N).

- One of the most important involves marijuana (Figure M). From 1975 through 1978 there had been a decline in the harmfulness perceived to be associated with all levels of marijuana use; but in 1979, for the first time, there was an increase in these proportions—an increase which has continued steadily since then. By far the most impressive increase has occurred for regular marijuana use, where there has been a full 23% jump in just three years in the proportion perceiving it as involving great risk—i.e., from 35% in 1978 to 58% in 1981. This is a dramatic change, and it has occurred during a period in which a substantial amount of scientific and media attention has been devoted to the potential dangers of heavy marijuana use.

- There also has been an important increase over a longer period in the number who think pack-a-day cigarette smoking involves great risk to the user (from 51% in 1975 to 64% in 1980), although this statistic showed no further increase this year (see Figure M). This shift corresponds with, and to some degree precedes, the downturn in regular smoking found in this age group.

- From 1975 to 1979 there had been a modest but consistent trend in the direction of fewer students associating much risk with experimental or occasional use of most of the other illicit drugs (Figure N). This trend continued this year only for amphetamines, however. Otherwise, there has been little change over the last two years and, if anything, even a slight reversal of previous trends.

- The percentage who perceived great risk in trying cocaine once or twice dropped from 43% in 1975 to 31% in 1980, which generally corresponds to a period of rapidly increasing use. But perceived risk has leveled in the last two years, also paralleling a leveling in use. The proportion seeing great risk in regular

FIGURE M

Trends in Perceived Harmfulness: Marijuana and Cigarettes

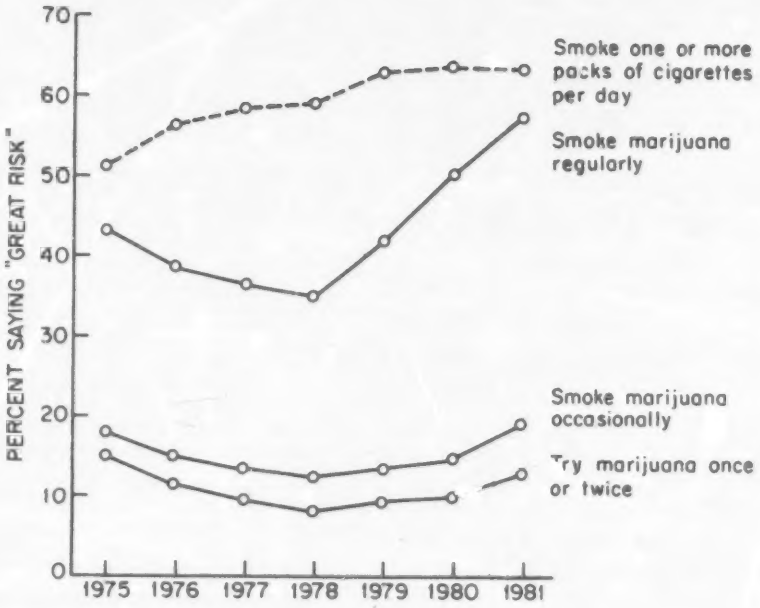


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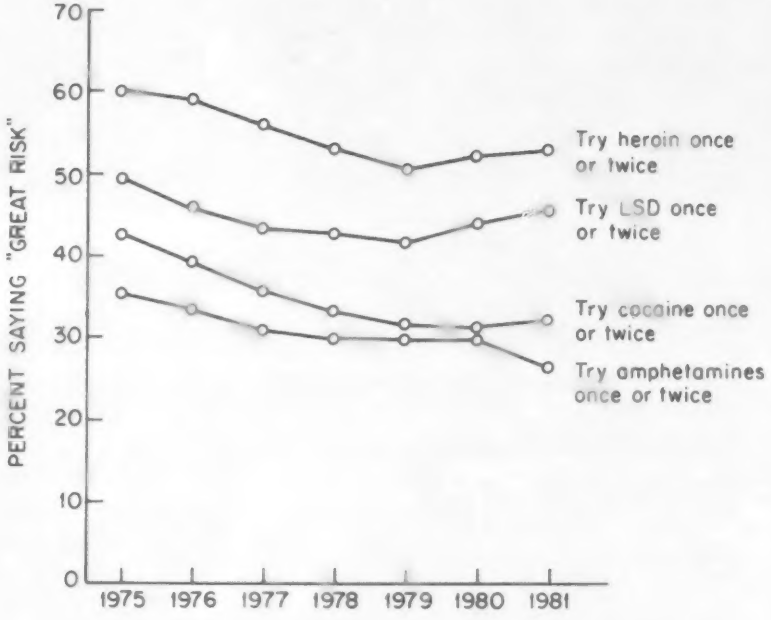
FIGURE N

Trends in Perceived Harmfulness: Other Drugs



cocaine use dropped somewhat from 1975 to 1977, but since then has risen a little (Table 11).

- In sum, there has been a sharp reversal in young people's concerns about regular marijuana use—one which began to occur in 1979—and since then there has been a more modest reversal in concerns about less frequent use of the drug and in concerns about experimenting with most other illicit drugs, as well.

Personal Disapproval of Drug Use

A different set of questions was developed to try to measure any general moral sentiment attached to various types of drug use. The phrasing, "Do you disapprove of people (who are 18 or older) doing each of the following" was adopted.

Extent of Disapproval in 1981

- The great majority of these students do not condone regular use of any of the illicit drugs (see Table 12). Even regular marijuana use is disapproved by 77%, and regular use of each of the other illicits receives disapproval from between 91% and 98% of today's high school seniors (see Table 12).

- Smoking a pack (or more) of cigarettes per day receives the disapproval of fully 70% of the age group.

- Drinking at the rate of one or two drinks daily also receives disapproval from two-thirds of the seniors (69%). A curious finding is that weekend binge drinking (five or more drinks once or twice each weekend) is acceptable to more seniors than is moderate daily drinking. While only 56% disapprove of having five or more drinks once or twice a weekend, 69% disapprove of having one or two drinks daily. This is in spite of the fact that they associate greater risk with weekend binge drinking (36%) than with the daily drinking (22%). One possible explanation for these seemingly inconsistent findings may stem from the fact that a greater proportion of this age group are themselves weekend binge drinkers rather than regular daily drinkers. They have thus expressed attitudes accepting of their own behavior, even though they may be somewhat inconsistent with their beliefs about possible consequences.

- For all drugs fewer people indicate disapproval of experimental or occasional use than of regular use, as would be expected. The differences are not great,

TABLE 12

Trends in Proportions Disapproving of Drug Use

Q. Do you disapprove of people who are (1) or (2) doing each of the following?[b]	Percent "disapproving"[a] Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Try marijuana once or twice	47.0	38.4	33.4	33.4	34.2	39.0	40.0	+1.0
Smoke marijuana occasionally	54.8	47.8	44.3	43.5	45.3	49.7	52.6	+2.9
Smoke marijuana regularly	71.9	69.5	65.5	67.5	69.2	74.6	77.4	+2.8s
Try LSD once or twice	82.8	84.6	83.9	85.4	86.6	87.3	86.4	-0.9
Take LSD regularly	94.1	95.3	95.8	96.4	96.9	96.7	96.8	+0.1
Try cocaine once or twice	81.3	82.4	79.1	77.0	74.7	76.3	74.6	-1.7
Take cocaine regularly	93.3	93.9	92.1	91.9	90.8	91.1	90.7	-0.4
Try heroin once or twice	91.5	92.6	92.5	92.0	93.4	93.5	93.5	0.0
Take heroin occasionally	94.8	96.0	96.0	96.4	96.8	96.7	97.2	+0.5
Take heroin regularly	96.7	97.5	97.2	97.8	97.9	97.6	97.8	+0.2
Try amphetamines once or twice	74.8	75.1	74.2	74.8	75.1	75.4	71.1	-4.3ss
Take amphetamines regularly	92.1	92.8	92.5	93.5	94.4	93.0	91.7	-1.3
Try barbiturates once or twice	77.7	81.3	81.1	82.4	84.0	83.9	82.4	-1.5
Take barbiturates regularly	93.3	93.6	93.0	94.3	95.2	95.4	94.2	-1.2
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	21.6	18.2	15.6	15.6	15.8	16.0	17.2	+1.2
Take one or two drinks nearly every day	67.6	68.9	66.8	67.7	68.3	69.0	69.1	+0.1
Take four or five drinks nearly every day	88.7	90.7	88.4	90.2	91.7	90.8	91.8	+1.0
Have five or more drinks once or twice each weekend	60.3	58.6	57.4	56.2	56.7	55.6	55.5	-0.1
Smoke one or more packs of cigarettes per day	67.5	65.9	66.4	67.0	70.3	70.8	69.9	-0.9
N =	(2677)	(3234)	(3582)	(3686)	(3221)	(3261)	(3610)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

[b] The 1975 question asked about people who are *"20 or older."*

however, for the illicit drugs other than marijuana. For example, 75% disapprove experimenting with cocaine vs. 91% who disapprove its regular use.

- For marijuana, however, the rate of disapproval varies substantially for different usage habits. Only about four out of every ten (40%) disapprove of trying marijuana and only half (53%) disapprove of occasional use of the drug, while three-quarters (77%) disapprove of regular use.

Trends in Disapproval

- Between 1975 and 1977 there was a substantial decrease in disapproval of marijuana use at any level of frequency (see Table 12). About 14% fewer seniors in the class of 1977 (compared with the class of 1975) disapproved of experimenting, 11% fewer disapproved of occasional use, and 6% fewer disapproved of regular use. Since 1977, however, there has been a substantial reversal of that trend, with disapproval of experimental use having risen by 7%, disapproval of occasional use by 8%, and disapproval of regular use by 12%. These changes are continuing again this year.

- Until this year the proportion of seniors who disapproved trying amphetamines remained extremely stable (at 75%), but in 1981 there was a 4% drop. In this case, a change in disapproval lagged a change in actual usage levels.

- During recent years personal disapproval for experimenting with barbiturates has been increasing (from 78% in 1975 to 84% in 1979); and over recent years disapproval for regular cigarette smoking also has been increasing (from 66% in 1976 to 71% in 1980). Both of these changes coincide with reductions in actual use. However, over the past two years both disapproval measures have remained virtually unchanged, corresponding to a a leveling in barbiturate use and a deceleration in the rate of decline for cigarette smoking.

- Disapproval of experimental use of cocaine had declined somewhat, from a high of 82% in 1976 down to 75% in 1979. But in the last two years, disapproval has leveled, along with both the perceived risk and the actual use of cocaine.

TABLE 13

Trends in Attitudes Regarding Legality of Drug Use

Q. *Do you think that people (who are 18 or older) should be prohibited by law from doing each of the following?*[b]	Percent saying "yes"[a]							
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Smoke marijuana in private	32.8	27.5	26.8	25.4	28.0	28.9	35.4	+6.5sss
Smoke marijuana in public places	63.1	59.1	58.7	59.5	61.8	66.1	67.4	+1.3
Take LSD in private	67.2	65.1	63.3	62.7	62.4	65.8	62.6	-3.2s
Take LSD in public places	85.8	81.9	79.3	80.7	81.5	82.8	80.7	-2.1
Take heroin in private	76.3	72.4	69.2	68.8	68.5	70.3	68.8	-1.5
Take heroin in public places	90.1	84.8	81.0	82.5	84.0	83.8	82.4	-1.4
Take amphetamines or barbiturates in private	57.2	53.5	52.8	52.2	53.4	54.1	52.0	-2.1
Take amphetamines or barbiturates in public places	79.6	76.1	73.7	75.8	77.3	76.1	74.2	-1.9
Get drunk in private	14.1	15.6	18.6	17.4	16.8	16.7	19.6	+2.9s
Get drunk in public places	55.7	50.7	49.0	50.3	50.4	48.3	49.1	+0.8
Smoke cigarettes in certain specified public places	NA	NA	42.0	42.2	43.1	42.8	43.0	+0.2
N =	(2620)	(3265)	(3629)	(3783)	(3288)	(3224)	(3611)	

NOTE: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.

[a]Answer alternatives were: (1) No, (2) Not sure, and (3) Yes.

[b]The 1975 question asked about people who are *"20 or older."*

- The small minority who disapprove of trying alcohol once or twice (22% in 1975) had become even smaller by 1977 (16%), but has remained relatively unchanged since.

Attitudes Regarding the Legality of Drug Use

Since the legal restraints on drug use appeared likely to be in a state of flux for some time, we decided at the beginning of the study to measure attitudes about legal sanctions. Table 13 presents a statement of one set of general questions on this subject along with the answers provided by each senior class. The set lists a sampling of illicit and licit drugs and asks whether their use should be prohibited by law. A distinction is consistently made between use in public and use in private—a distinction which proved quite important in the results.

Attitudes in 1981

- Fully 43% believe that cigarette smoking in public places should be prohibited by law—almost as many as think getting drunk in such places should be prohibited (49%).

- Two-thirds (67%) favor legally prohibiting marijuana use in public places, despite the fact that the majority have used marijuana themselves; but only about a third (35%) feel that way about marijuana use in private.

- In addition, the great majority believe that the use in public of other illicit drugs than marijuana should be prohibited by law (e.g., 79% in the case of amphetamines and barbiturates, 82% for heroin).

- For all drugs, substantially fewer students believe that use in private settings should be illegal.

Trends in These Attitudes

- From 1975 through 1977 there was a modest decline (from 4% to 9%, depending on the substance) in the proportion of seniors who favored legal prohibition of private use of any of the illicit drugs. Now, however, the evidence suggests that these downward trends have halted and in some cases reversed.

- This year there was a sharp jump (from 29% to 35%) in the proportion favoring legal prohibition of marijuana use in private.

- There also has developed increased support since 1978 for the prohibition of marijuana use in public (up from 60% in 1978 to 67% this year).

TABLE 14

Trends in Attitudes Regarding Marijuana Laws

(Entries are percentages)

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981
Q. There has been a great deal of public debate about whether marijuana use should be legal. Which of the following policies would you favor?							
Using marijuana should be entirely legal	27.3	32.6	33.6	32.9	32.1	26.3	23.1
It should be a minor violation like a parking ticket but not a crime	25.3	29.0	31.4	30.2	30.1	30.9	29.3
It should be a crime	30.5	25.4	21.7	22.2	24.0	26.4	32.1
Don't know	16.8	13.0	13.4	14.6	13.8	16.4	15.4
N =	(2617)	(3264)	(3622)	(3721)	(3278)	(3211)	(3593)
Q. If it were legal for people to USE marijuana, should it also be legal to SELL marijuana?							
No	27.8	23.0	22.5	21.8	22.9	25.0	27.7
Yes, but only to adults	37.1	49.8	52.1	53.6	53.2	51.8	48.6
Yes, to anyone	16.2	13.3	12.7	12.0	11.3	9.6	10.5
Don't know	18.9	13.9	12.7	12.6	12.6	13.6	13.2
N =	(2616)	(3279)	(3628)	(3719)	(3280)	(3210)	(3599)
Q. If marijuana were legal to use and legally available, which of the following would you be most likely to do?							
Not use it, even if it were legal and available	53.2	50.4	50.6	46.4	50.2	53.3	55.2
Try it	8.2	8.1	7.0	7.1	6.1	6.8	6.0
Use it about as often as I do now	22.7	24.7	26.8	30.9	29.1	27.3	24.8
Use it more often than I do now	6.0	7.1	7.4	6.3	6.0	4.2	4.7
Use it less than I do now	1.3	1.5	1.5	2.7	2.5	2.6	2.5
Don't know	8.5	8.1	6.6	6.7	6.1	5.9	6.9
N =	(2602)	(3272)	(3625)	(3711)	(3277)	(3210)	(3598)

The Legal Status of Marijuana

Another set of questions goes into more detail about what legal sanctions, if any, students think should be attached to the use and sale of marijuana. Respondents also are asked to guess how they would be likely to react to legalized use and sale of the drug. While the answers to such a question must be interpreted cautiously, we think it worth exploring how young people think they might respond to such changes in the law. (The questions and responses are shown in Table 14.)

Attitudes and Predicted Response to Legalization: 1981

- Only about one quarter of the seniors believe marijuana use should be entirely legal (23%). About three out of ten (29%) feel it should be treated as a minor violation—like a parking ticket—but not as a crime. Another 15% indicate no opinion, leaving about one-third (32%) who feel it still should be a crime. In other words, of those expressing an opinion, over six in ten believe that marijuana use should not be treated as a criminal offense.

- Asked whether they thought it should be legal to sell marijuana if it were legal to use it, a majority (59%) said "yes." However, nearly all of these respondents would permit sale only to adults, thus suggesting more conservatism on this subject than might generally be supposed.

- High school seniors predict that they would be little affected by the legalization of both the sale and use of marijuana. Over half of the respondents (55%) say that they would not use the drug even if it were legal to buy and use, and another 27% indicate they would use it about as often as they do now, or less. Only 5% say they would use it more often than at present and only another 6% say they would try it. Some 7% say they do not know how they would react.

Trends in Attitudes and Predicted Responses

- Between 1976 and 1979 seniors' preferences for decriminalization or legalization remained fairly constant; but in the past two years there was a sharp drop in the proportion favoring outright legalization (down from 32% in 1979 to 23% in 1981), while there was a corresponding increase in the proportion saying marijuana use should be a crime.

- Also reflecting the recent increased conservatism about marijuana, somewhat fewer now would support

legalized sale even if use were to be made legal (down from 65% in 1979 to 59% in 1981).

- The predictions about personal marijuana use, if sale and use were legalized, have been quite similar for all six high school classes. The slight shifts being observed are mostly attributable to the changing proportions of seniors who actually use marijuana.

THE SOCIAL MILIEU

The preceding section dealt with seniors' attitudes about various forms of drug use. Attitudes about drugs, as well as drug-related behaviors, obviously do not occur in a social vacuum. Drugs are discussed in the media; they are a topic of considerable interest and conversation among young people; they are also a matter of much concern to parents, concern which often is strongly communicated to their children. Young people are known to be affected by the actual drug-taking behaviors of their friends and acquaintances, as well as by the availability of the various drugs. This section presents data on several of these relevant aspects of the social milieu.

We begin with two sets of questions about parental and peer attitudes, questions which closely parallel the questions about respondents' own attitudes about drug use, discussed in the preceding section. Since parental attitudes are now only included in the survey intermittently, those discussed here are based on the 1979 results.

Perceived Attitudes of Parents and Friends

Current Perceptions of Parental Attitudes

- Based on our most recent (1979) measures of perceived parental attitudes, a large majority of seniors feel that their parents would disapprove or strongly disapprove of their exhibiting any of the drug use behaviors shown in Table 15. (The data for the perceived parental attitudes are not tabulated, but are displayed in Figures O and P.)

- Over 97% of seniors say that their parents would disapprove or strongly disapprove of their smoking marijuana regularly, even trying LSD or amphetamines, or having four or five drinks every day. (Although the questions did not include more frequent use of LSD or amphetamines, or any use of heroin, it is obvious that if such behaviors were included in the list

TABLE 15

Trends in Proportion of Friends Disapproving of Drug Use

How do you think your close friends feel (or would feel) about you. . .	Adjustment Factor	Percent saying friends disapprove[a] Class of 1975[b]	Class of 1976	Class of 1977[b]	Class of 1978	Class of 1979[b]	Class of 1980	Class of 1981	'80-'81 change
Trying marijuana once or twice	(-0.6)	44.2	NA	41.8	NA	40.9	42.6	46.4	+3.8s
Smoking marijuana occasionally	(+0.8)	54.8	NA	49.0	NA	48.2	50.6	55.9	+5.3ss
Smoking marijuana regularly	(+4.6)	75.0	NA	69.1	NA	70.2	72.0	75.0	+3.0s
Trying LSD once or twice	(+2.0)	88.6	NA	86.6	NA	87.0	87.4	86.5	-0.9
Trying an amphetamine once or twice	(+2.2)	78.8	NA	80.3	NA	81.0	78.9	74.4	-4.5ss
Taking one or two drinks nearly every day	(+7.8)	67.2	NA	71.0	NA	71.0	70.5	69.5	-1.0
Taking four or five drinks every day	(+3.3)	83.2	NA	88.1	NA	88.6	87.9	86.4	-1.5
Having five or more drinks once or twice every weekend	(+4.7)	55.0	NA	53.4	NA	51.3	50.6	50.3	-0.3
Smoking one or more packs of cigarettes per day	(+3.3)	63.6	NA	68.3	NA	73.4	74.4	73.8	-0.6
Approx. N =		(2988)	(NA)	(2971)	(NA)	(2716)	(2766)	(3120)	

NOTE: NA indicates question not asked.

[a]Answer alternatives were: (1) Not disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

[b]These figures have been adjusted by the factors reported in the first column because of lack of comparability of question-context among administrations. (See text for discussion.)

virtually all seniors would indicate parental disapproval.)

- While respondents feel that marijuana use would receive the least parental disapproval of all of the illicit drugs, even experimenting with it still is seen as a parentally disapproved activity by the great majority of the seniors (85%). Assuming that the students are generally correct about their parents' attitudes, these results clearly show that there remains a rather massive generational difference of opinion about this drug.

- Also likely to be perceived as rating high parental disapproval (around 92% disapproval) are occasional marijuana use, taking one or two drinks nearly every day, and pack-a-day cigarette smoking.

- Slightly lower proportions of seniors (85%) think their parents would disapprove of their having five or more drinks once or twice every weekend. This happens to be exactly the same percentage as say their parents would disapprove of simply experimenting with marijuana.

Current Perceptions of Friends' Attitudes

- A parallel set of questions asked respondents to estimate their friends' attitudes about drug use (Table 15). These questions ask "How do you think your close friends feel (or would feel) about you ...". The highest levels of disapproval are associated with heavy daily drinking (86% think friends would disapprove), trying LSD (87%), and trying an amphetamine (74%). Presumably, if heroin were on the list it would receive the highest peer disapproval; and, judging from respondents' own attitudes, barbiturates and cocaine would be roughly as unpopular among peers as amphetamines.

- A substantial majority think their friends would disapprove if they smoked marijuana regularly (75%), or smoked a pack or more of cigarettes daily (74%).

- While heavy drinking on weekends is judged by half (50%), to be disapproved by their friends, most (70%) think sustained daily drinking would be disapproved.

- Over half (56%) feel that friends would disapprove of occasional marijuana smoking and slightly fewer (46%) feel their friends would disapprove trying marijuana once or twice.

- In sum, peer norms differ considerably for the various drugs and for varying degrees of involvement with those drugs, but overall they tend to be relatively conservative. The great majority of seniors have friendship circles which do not condone use of the illicit drugs other than marijuana, and three-fourths feel that their friends would disapprove of regular marijuana use.

A Comparison of the Attitudes of Parents, Peers, and Respondents Themselves

- A comparison of the perceptions of friends' disapproval with perceptions of parents' disapproval shows several interesting things.

- First there is rather little variability among different students in their perceptions of their parent's attitudes: on any of the drug behaviors listed nearly all say their parents would disapprove. Nor is there much variability among the different drugs in perceived parental attitudes. Peer norms vary much more from drug to drug. The net effect of these facts is likely to be that peer norms have a much greater chance of explaining variability in the respondent's own individual attitudes or use than parental norms, simply because the peer norms vary more.

- Despite there being less variability in parental attitudes, the ordering of drug use behaviors is much the same for them as for peers (e.g., among the illicit drugs the highest frequencies of perceived disapproval are for trying LSD or amphetamines, while the lowest frequencies are for trying marijuana).

- A comparison with the seniors' own attitudes regarding drug use (see Figures O and P) reveals that on the average they are much more in accord with their peers than with their parents. The differences between seniors' own disapproval ratings and those attributed to their parents tend to be large, with parents seen as more conservative overall in relation to every drug, licit or illicit. The largest difference occurs in the case of marijuana experimentation, where only 40% say they disapprove but in 1979 85% said their parents would.

Trends in Perceptions of Parents' and Friends' Views

- Several important changes in the perceived attitudes of others have been taking place recently—and particularly among peers. These shifts are presented graphically in Figures O and P. As can be seen in those figures, adjusted (dotted) trend lines have been introduced before 1980. This was done because we discovered that the deletion in 1980 of the questions about parents' attitudes—which up until then had immediately preceded friends' attitudes in the questionnaire—removed an artifactual depression of the answers on friends' use, a phenomenon known as a question-context effect. This effect was particularly evident in the trend lines dealing with alcohol use, where an abrupt upward shift occurred in 1980 in otherwise smooth lines. It appears that when questions about parents' attitudes were present, respondents tended to understate peer disapproval in order to emphasize the difference in attitudes between their parents and their peers. In the adjusted lines, we have attempted to correct for that artifactual depression in the 1975, 1977, and 1979 scores.* We think the adjusted trend lines give a more accurate picture of the change taking place. For some reason, the question-context effect seems to have more influence on the questions dealing with cigarettes and alcohol than on those dealing with illicit drugs.

- For each level of marijuana use—trying once or twice, occasional use, regular use—there had been a drop in perceived disapproval for both parents and friends up until 1977 or 1978. We know from our other findings that these perceptions correctly reflected actual shifts in the attitudes of their peer groups—that is, that acceptance of marijuana was in fact increasing among

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*The correction evolved as follows. We assumed that a more accurate estimate of the true change between 1979 and 1980 could be obtained by taking an average of the changes observed in the year prior and the year subsequent, rather than by taking the observed change (which we knew to contain the effect of a change in question content). We thus calculated an adjusted 1979-1980 change score by taking an average of one half the 1977-1979 change score (our best estimate of the 1978-79 change) plus the 1980-1981 change score. This estimated change score was then subtracted from the observed change score for 1979-1980, the difference being our estimate of the amount by which peer disapproval of the behavior in question was being understated because of the context in which the questions occurred prior to 1980. The 1975, 1977, and 1979 observations were then adjusted upward by the amount of that correction factor. (Table 16 shows the correction factors in the first column.)

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seniors (see Figure O). There is little reason to suppose such perceptions are less accurate in reflecting shifts in parents' attitudes. Therefore, we conclude that the social norms regarding marijuana use among adolescents had been relaxing. However, consistent with the seniors' reports about their own attitudes, the liberal shift in these social norms has sharply reversed in the last several years, especially among peers.

- Until the past year there had been relatively little change in either self-reported or perceived peer attitudes toward amphetamine use, but in 1981 both measures showed significant and parallel drops in disapproval (as use rose sharply).

- Perceived parental norms regarding most drugs other than marijuana showed little or no change (between 1975 and 1979, where data are available); peer norms for LSD have been quite stable since 1975.

- By far the largest change in perceptions of peer norms had been occurring in relation to regular cigarette smoking. The proportion of seniors saying that their friends would disapprove of them smoking a pack-a-day or more rose from 64% (adjusted version) in 1975 to 74% in 1980. This year, however, there was no further change in seniors' perceptions of peer disapproval for smoking, just as there was no further change in their own reported attitudes.

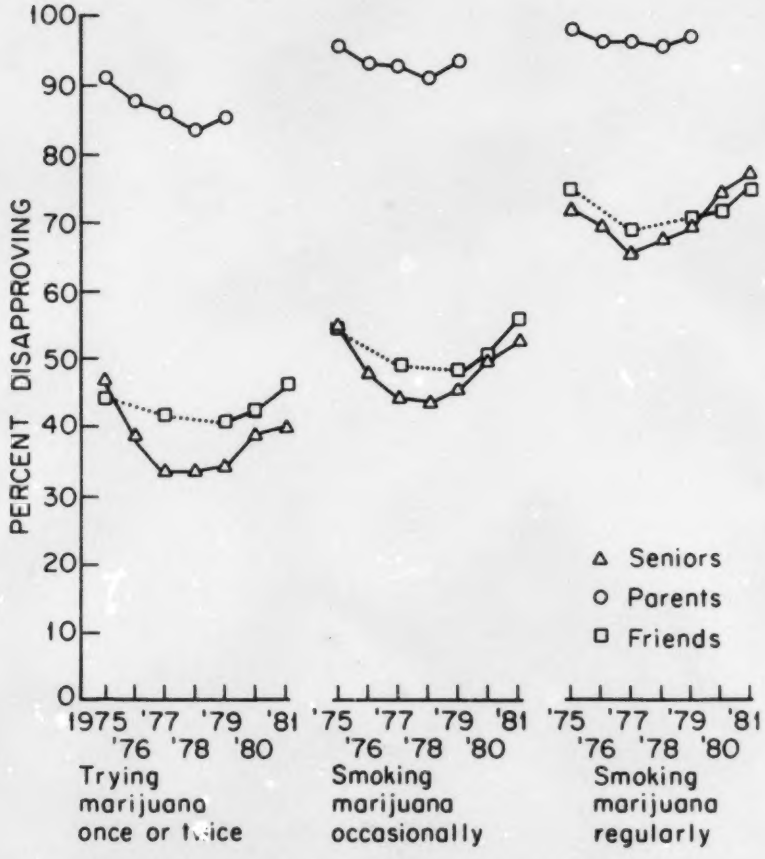
- For alcohol, perceived peer norms have moved very much in parallel with seniors' own statements of disapproval. Heavy daily drinking is seen as remaining disapproved by the great majority. Weekend binge drinking showed some modest decline in disapproval up through 1980. Since then it has remained level.

Exposure to Drug Use by Friends and Others

It is generally agreed that much of youthful drug use is initiated through a peer social-learning process; and research has shown a high correlation between an individual's illicit drug use and that of his or her friends. Such a correlation can, and probably does, reflect several different causal patterns: (a) a person with friends who use a drug will be more likely to try the drug; (b) conversely, the individual who is already using a drug will be likely to introduce friends to the experience; and (c) one who is already a user is more likely to establish friendships with others who also are users.

FIGURE O

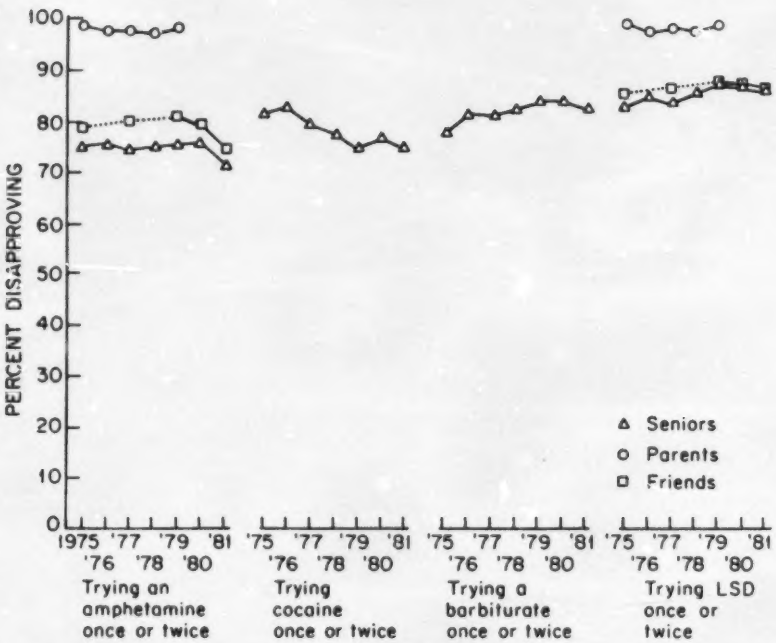
Trends in Disapproval of Illicit Drug Use
Seniors, Parents, and Peers



NOTE: Points connected by dotted lines have been adjusted because of lack of comparability of question-context among administrations. (See text for discussion.)

FIGURE O (cont.)

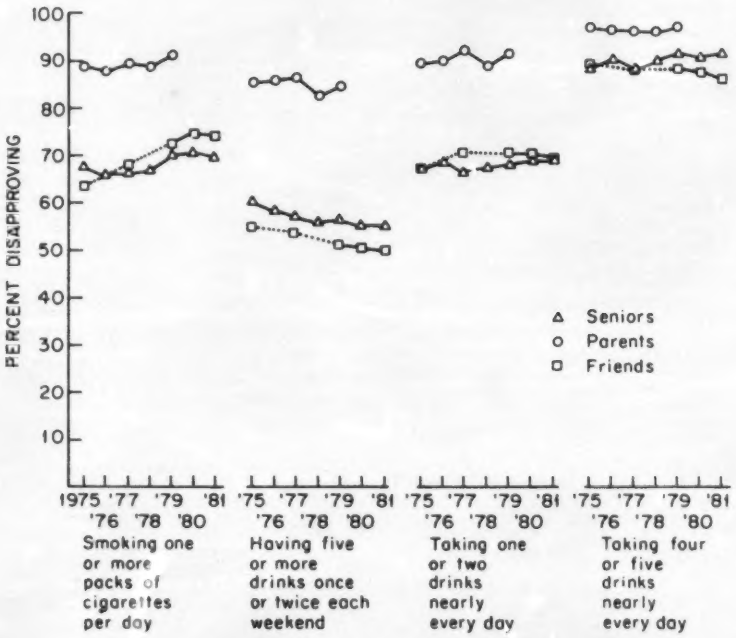
Trends in Disapproval of Illicit Drug Use
Seniors, Parents, and Peers



NOTE: Points connected by dotted lines have been adjusted because of lack of comparability of question-context among administrations. (See text for discussion.)

FIGURE P

Trends in Disapproval of Licit Drug Use
Seniors, Parents, and Peers



NOTE: Points connected by dotted lines have been adjusted because of lack of comparability of question-context among administrations. (See text for discussion.)

Given the potential importance of exposure to drug use by others, we felt it would be useful to monitor seniors' association with others taking drugs, as well as seniors' perceptions about the extent to which their friends use drugs. Two sets of questions, each covering all or nearly all of the categories of drug use treated in this report, asked seniors to indicate (a) how often during the past twelve months they were around people taking each of the drugs to get high or for "kicks," and (b) what proportion of their own friends use each of the drugs. (The questions dealing with friends' use are shown in Table 16. The data dealing with direct exposure to use may be found in Table 17.) Obviously, responses to these two questions are highly correlated with the respondents' own drug use; thus, for example, seniors who have recently used marijuana are much more likely to report that they have been around others getting high on marijuana, and that most of their friends use it.

Exposure to Drug Use in 1981

- A comparison of responses about friends' use, and about being around people in the last twelve months who were using various drugs to get high, reveals a high degree of correspondence between these two indicators of exposure. For each drug, the proportion of respondents saying "none" of their friends use it is fairly close to the proportion who say that during the last twelve months they have not been around anyone who was using that drug to get high. Similarly, the proportion saying they are "often" around people getting high on a given drug is roughly the same as the proportion reporting that "most" or "all" of their friends use that drug.

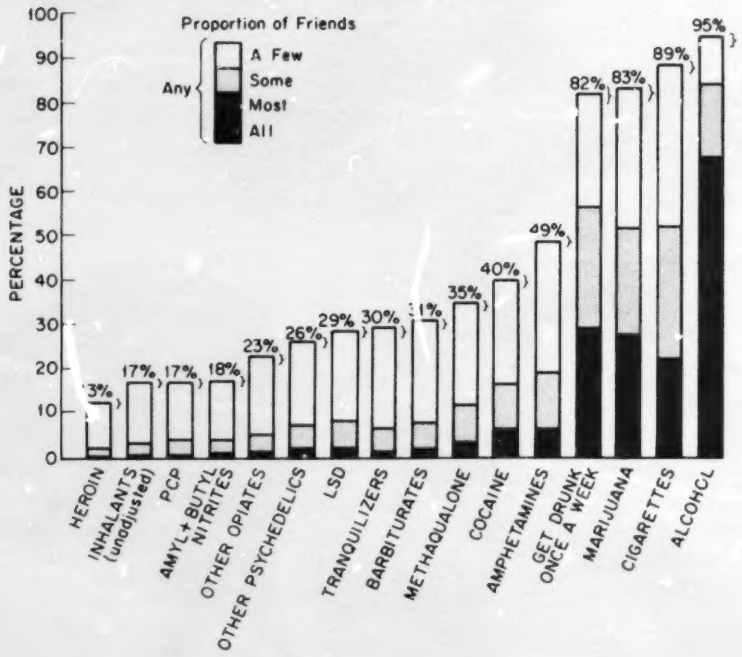
- Reports of exposure and friends' use closely parallel the figures on seniors' own use (compare Figures A and Q). It thus comes as no surprise that the highest levels of exposure involve alcohol (a majority (61%) say they are "often" around people using it to get high). What may come as a surprise is that fully 29% of all seniors say that most or all of their friends go so far as to get drunk at least once a week. (This is consistent, however, with the fact that 41% said they personally had taken five or more drinks in a row during the prior two weeks.)

- The drug to which students are next most frequently exposed is marijuana. Some 33% are "often" around people using it to get high, and another 27% are exposed "occasionally." Only 20% report no exposure during the year.

- Amphetamines, the most widely used class of illicit drugs other than marijuana, is also the one to which seniors are next most often exposed. About half of all

FIGURE Q

Proportion of Friends Using Each Drug as Estimated by Seniors, in 1981



seniors (50%) have been around someone using them to get high over the past year, and 12% say they are "often" around people doing this.

- For the remaining illicit drugs there are far lower rates, with any exposure to use in the past year ranging from 36% for cocaine, down to 7% for heroin.

Recent Trends in Exposure to Drug Use

- During the two-year interval from 1976 to 1978, seniors' reports of exposure to marijuana use increased in just about the same proportion as percentages on actual monthly use. In 1979 both exposure to use and actual use stabilized; and since 1979 both have been dropping. The proportion saying they are often around people using marijuana dropped from 39% to 33% between 1979 and 1981.

- Following a somewhat similar pattern, cocaine had a consistent increase from 1976 to 1979 in the proportions exposed to users. Since 1979, however, both exposure and use have remained fairly stable.

- Over the last two years there have been statistically significant decreases in exposure to others using tranquilizers, and psychedelics other than LSD which coincide with continued declines in the self-reported use of these drugs.

- There also had been a gradual decrease in exposure to barbiturates and LSD through 1980; but both were virtually unchanged this year, as were the usage figures for those drugs.

- Trend data are only available since 1979 on friends' use of PCP or the nitrites. For both drugs, exposure to friends' use has dropped significantly over the last two years. Nearly 11% fewer seniors in 1981 (17%) say any of their friends use PCP than was true as recently as 1979 (28%). The comparable drop for nitrites was from 22% to 17%.

- The proportion having some friends who use amphetamines rose some 5% this year on top of a 3% rise last year—thus paralleling the sharp increase in reported use over the period. The proportion saying they are around people using amphetamines "to get high or for kicks" has also changed sharply, particularly this year. This latter finding is important, since it indicates that a substantial part of the increase we have observed in

TABLE 16

Trends in Proportions of Friends Using Drugs

(Entries are percentages)

Q. *How many of your friends would you estimate...*	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Smoke marijuana								
% saying none	17.0	17.1	14.1	13.9	12.4	13.6	17.0	+3.4ss
% saying most or all	30.3	30.6	32.3	35.3	35.5	31.3	27.7	-3.6s
Use inhalants								
% saying none	75.7	81.4	81.1	80.0	80.9	82.2	83.5	+1.3
% saying most or all	1.1	1.1	1.0	1.1	1.1	1.2	0.9	-0.3
Use nitrites								
% saying none	NA	NA	NA	NA	78.4	81.0	82.6	+1.6
% saying most or all	NA	NA	NA	NA	1.9	1.3	1.2	-0.1
Take LSD								
% saying none	63.5	69.4	68.1	70.1	71.1	71.9	71.5	-0.4
% saying most or all	2.7	2.8	3.0	2.0	1.9	1.8	2.2	+0.4
Take other psychedelics								
% saying none	58.8	69.7	68.6	70.8	71.8	71.8	73.7	+1.9
% saying most or all	4.7	3.0	2.8	2.0	2.2	2.2	2.1	-0.1
Take PCP								
% saying none	NA	NA	NA	NA	72.2	77.8	82.8	+5.0sss
% saying most or all	NA	NA	NA	NA	1.7	1.6	0.9	-0.7s
Take cocaine								
% saying none	66.4	71.2	69.9	66.8	61.1	58.4	59.9	+1.5
% saying most or all	3.4	3.2	3.6	4.0	6.0	6.1	6.3	+0.2
Take heroin								
% saying none	84.8	86.4	87.1	85.7	87.1	87.0	87.5	+0.5
% saying most or all	0.7	0.8	0.7	0.9	0.5	1.0	0.5	-0.5
Take other narcotics								
% saying none	71.2	75.9	76.3	76.8	76.9	77.6	76.9	-0.7
% saying most or all	2.1	2.2	1.7	1.4	1.5	1.7	1.5	-0.2
Take amphetamines								
% saying none	49.0	57.8	58.7	59.3	59.3	56.1	51.2	-4.9ss
% saying most or all	5.9	5.6	4.1	4.7	4.3	4.8	6.4	+1.6s
Take barbiturates								
% saying none	55.0	63.7	65.3	67.5	69.3	69.5	68.9	-0.6
% saying most or all	4.3	3.5	3.0	2.3	2.1	2.6	2.1	-0.5

(Table continued on next page)

TABLE 16 (cont.)

Trends in Proportions of Friends Using Drugs

(Entries are percentages)

Q. How many of your friends would you estimate...	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Take quaaludes								
% saying none	68.3	73.0	71.7	73.0	72.3	67.5	65.0	-2.5
% saying most or all	3.0	1.8	2.9	2.2	2.8	3.6	3.6	0.0
Take tranquilizers								
% saying none	54.4	63.7	62.2	65.2	68.0	70.3	70.5	+0.2
% saying most or all	3.5	3.1	2.7	1.8	2.0	1.9	1.4	-0.5
Drink alcoholic beverages								
% saying none	3.3	4.9	5.6	5.1	4.6	3.9	5.3	+1.4s
% saying most or all	68.4	64.7	66.2	68.9	68.5	68.9	67.7	-1.2
Get drunk at least once a week								
% saying none	17.6	19.3	19.0	18.0	16.7	16.9	18.2	+1.3
% saying most or all	30.1	26.6	27.6	30.2	32.0	30.1	29.4	-0.7
Smoke cigarettes								
% saying none	4.8	6.3	6.3	6.9	7.9	9.4	11.5	+2.1s
% saying most or all	41.5	36.7	33.9	32.2	28.6	23.3	22.4	-0.9
Approx. N =	(2640)	(2929)	(3184)	(3267)	(2933)	(2987)	(3307)	

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001.

NA indicates data not available.

TABLE 17

Trends in Exposure to Drug Use

(Entries are percentages)

4. *During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?*	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Marijuana								
% saying not at all	NA	20.5	19.0	17.3	17.0	18.0	19.8	+1.8
% saying often	NA	32.5	37.0	39.0	38.9	33.8	33.1	-0.7
LSD								
% saying not at all	NA	78.8	80.0	81.9	81.9	82.8	82.6	-0.2
% saying often	NA	2.2	2.0	1.8	2.0	1.4	2.0	+0.6
Other psychedelics								
% saying not at all	NA	76.5	76.7	76.7	77.6	79.6	82.4	+2.8s
% saying often	NA	3.1	3.2	2.9	2.2	2.2	2.0	-0.2
Cocaine								
% saying not at all	NA	77.0	73.4	69.8	64.0	62.3	63.7	+1.4
% saying often	NA	3.0	3.7	4.6	6.8	5.9	6.6	+0.7
Heroin								
% saying not at all	NA	91.4	90.3	91.8	92.4	92.6	93.4	+0.8
% saying often	NA	0.8	1.1	0.9	0.7	0.4	0.6	+0.2
Other narcotics								
% saying not at all	NA	81.9	81.3	81.8	82.0	80.4	82.5	+2.1
% saying often	NA	1.8	2.4	2.0	1.7	1.7	1.7	0.0
Amphetamines								
% saying not at all	NA	59.6	60.3	60.9	58.1	59.2	50.5	-8.7sss
% saying often	NA	6.8	7.9	6.7	7.4	8.3	12.1	+3.8sss
Barbiturates								
% saying not at all	NA	69.0	70.5	73.5	73.6	74.8	74.1	-0.7
% saying often	NA	4.5	5.0	3.4	3.3	3.4	4.0	+0.6
Tranquilizers								
% saying not at all	NA	67.7	66.0	67.2	67.5	70.9	71.0	+0.1
% saying often	NA	5.5	6.3	4.9	4.3	3.2	4.2	+1.0
Alcoholic beverages								
% saying not at all	NA	6.0	5.6	5.5	5.2	5.3	6.0	+0.7
% saying often	NA	57.1	60.8	60.8	61.2	60.2	61.0	+0.8
Approx. N =	(NA)	(3249)	(3579)	(3682)	(3253)	(3259)	(3608)	

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001.

NA indicates data not available.

self-reported amphetamine use is due to things other than simply an increase in the use of over-the-counter diet pills or stay-awake pills, which presumably are not used to get high. Obviously more young people are now using stimulants for recreational purposes. There still remains the question, of course, of whether the active ingredients in these stimulants are really amphetamines.

- Methaqualone use rose last year, as did the proportion saying some of their friends used. This year current use has nearly leveled, as has the trend in friends' use.

- The proportion saying that "most or all" of their friends smoke cigarettes has dropped steadily, from 37% in 1976 to 22% in 1981. (During this period actual use has dropped markedly, and more seniors now perceive their friends as disapproving regular smoking.)

- The proportion saying most or all of their friends get drunk at least once a week had been increasing steadily, from 27% in 1976 to 32% in 1979. It has declined slightly to 29% over the past two years—an interval in which the frequency of self-reported binge drinking has remained stable.

Perceived Availability of Drugs

One set of questions asks for estimates of how difficult it would be to obtain each of a number of different drugs. The answers range across five categories from "probably impossible" to "very easy." While no systematic effort has been undertaken to assess the validity of these measures, it must be said that they do have a rather high level of face validity—particularly if it is the subjective reality of "perceived availability" which is purported to be measured. It also seems quite reasonable to us to assume that perceived availability tracks actual availability to some extent.

Perceived Availability in 1981

- There are substantial differences in the reported availability of the various drugs. In general, the more widely used drugs are reported to be available by the highest proportion of the age group, as would be expected (see Table 18 and Figure R).

- Marijuana appears to be almost universally available to high school seniors; nearly 90% report that they think it would be "very easy" or "fairly easy" for them to get—roughly 30% more than the number who report ever having used it.

TABLE 18

Trends in Reported Availability of Drugs

Q. *How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?*	Percent saying drug would be "Fairly easy" or "Very easy" for them to get[a]							
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	'80-'81 change
Marijuana	87.8	87.4	87.9	87.8	90.1	89.0	89.2	+0.2
LSD	46.2	37.4	34.5	32.2	34.2	35.3	35.0	-0.3
Some other psychedelic	47.8	35.7	33.8	33.8	34.6	35.0	32.7	-2.3
Cocaine	37.0	34.0	33.0	37.8	45.5	47.9	47.5	-0.4
Heroin	24.2	18.4	17.9	16.4	18.9	21.2	19.2	-2.0
Some other narcotic (including methadone)	34.5	26.9	27.8	26.1	28.7	29.4	29.6	+0.2
Amphetamines	67.8	61.8	58.1	58.5	59.9	61.3	69.5	+8.2sss
Barbiturates	60.0	54.4	52.4	50.6	49.8	49.1	54.9	+5.8sss
Tranquilizers	71.8	63.5	64.9	64.3	61.4	59.1	60.8	+1.7
	N = (2627)	(3163)	(3562)	(3598)	(3172)	(3240)	(3578)	

NOTES: Level of significance of difference between the two most recent classes:
s = .05, ss = .01, sss = .001.

[a]Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

- After marijuana, the students indicate that the psychotherapeutic drugs are the most available to them: amphetamines are seen as available by 70%, tranquilizers by 61%, and barbiturates by 55%.

- Nearly half of the seniors (48%) now see cocaine as available to them.

- LSD, other psychedelics, and opiates other than heroin are reported as available by only about one of every three seniors (35%, 33%, and 30%, respectively).

- Heroin is seen by the fewest seniors (19%) as being fairly easy to get.

- The majority of "recent users" of all drugs—those who have illicitly used the drug in the past year—feel that it would be fairly easy for them to get that same type of drug. (Data not shown here; see full volume.)

- There is some variation by drug class, however. Most (from 83% to 98%) of the recent users of marijuana, cocaine, amphetamines, and barbiturates feel they could get those same drugs fairly easily. Smaller majorities of those who used tranquilizers (72%), LSD (73%) or other opiates (62%) feel it would be fairly easy for them to get those drugs again. And, of the recent users of heroin, only slightly more than half (58%) think it would be fairly easy to get some more.

Trends in Perceived Availability

- The two drug classes showing the most important changes in reported availability this year are amphetamines and barbiturates.

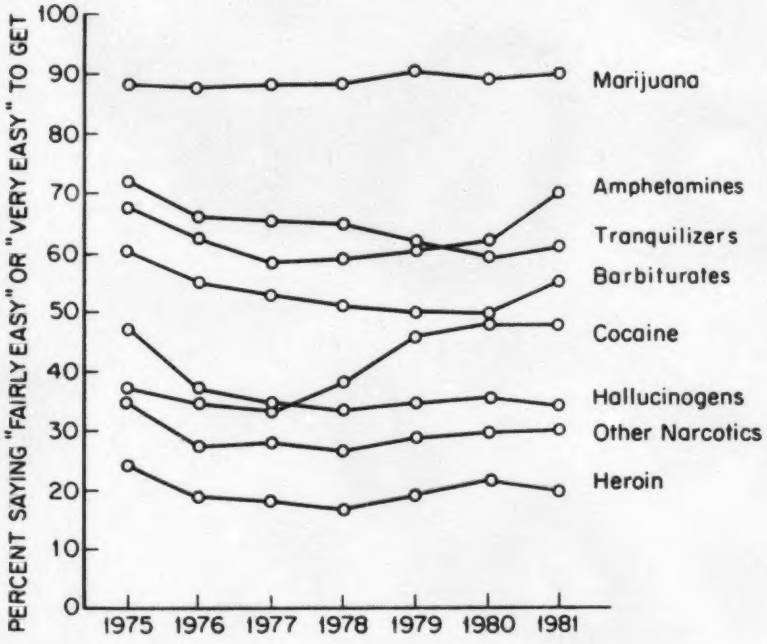
- Amphetamines showed a full 8% jump (to 70%) in the number of all seniors who think they could get some fairly easily if they wanted them. This follows a much more gradual increase over the prior two years and, of course, parallels the sharp rise in self-reported use. In fact, in this case we think greater availability of what seniors at least think are amphetamines, may well account for a good part of that rise in use.

- The perceived availability of barbiturates also jumped nearly 6% this year, but was not accompanied by any increase in use. (Barbiturate availability had been very stable over the two prior years.)

- Perceptions of marijuana availability have remained quite steady across the last six high school classes (at between 87% and 90% of the entire sample).

FIGURE R

Trends in Perceived Availability of Drugs



- Between 1977 and 1980 there had been a substantial (15%) increase in the perceived availability of cocaine (see Figure R and Table 18). Among recent cocaine users there also was a substantial increase observed over that three year interval (data not shown). There was no further change in 1981, however, either among all seniors or among recent users.

- Most other drugs showed little or no change in perceived availability this year.

Implications for Validity of Self-Reported Usage Questions

- We have noted a high degree of correspondence in the aggregate level data presented in this report among seniors' self-reports of their own drug use, their reports concerning friends' use, and their own exposure to use. Drug-to-drug comparisons in any given year across these three types of measures tend to be highly parallel, as do the changes from year to year. We take this consistency as additional evidence for the validity of the self-report data, since there should be less reason to distort answers on friends' use, or general exposure to use, than to distort the reporting of one's own use.

OTHER RECENT FINDINGS FROM THE STUDY

In this section we summarize some key results from the study which have been published or presented elsewhere over the past year. Obviously, only brief synopses are appropriate for inclusion here. However, the interested reader may secure copies of the relevant papers, or request the brochure "Recent Publications Available," by writing the authors at Room 2030, Institute for Social Research, The University of Michigan, Ann Arbor, Michigan 48109.

Changes in Drug Use After High School

Relatively little longitudinal research exists on the progression of drug-using behaviors through the early adult years, a period during which young people make a number of important transitions into new social environments and experiences. One of the purposes of the Monitoring the Future project is to study patterns of drug use during the years following high school; accordingly, the project includes follow-up surveys of subsamples of those seniors who participated in each of the high school data collections. Because such follow-up efforts are more expensive than the senior-year surveys, they are pursued on a smaller scale. It is also the case that analyses of longitudinal panel data, in which senior-year responses are compared with later follow-up reports by the same individuals, are more complex than the comparisons among senior classes reported in this volume. In the past year, one set of panel analyses was completed, and reported initially in the Monitoring the Future Occasional Papers series.* It is based on seniors in the classes of 1975-1979 followed up one to three years after graduation (follow-up data collected in 1978-1980). Key findings are summarized below.

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*Bachman, J. G., O'Malley, P. M., and Johnston, L. D. Changes in drug use after high school as a function of role status and social environment (Monitoring the Future Occasional Paper 11). Ann Arbor: Institute for Social Research, 1981. Copies are available from the authors.

- Overall levels of drug use did not change dramatically during the first few years following high school. The percentage of respondents reporting any use of cigarettes did not increase; however, after graduation some of them stepped up the amount they smoked. More specifically, there were substantial increases in the proportions of young adults who crossed the pack-a-day threshhold. Alcohol use increased somewhat following graduation (no doubt partly due to the increased proportions who reached the age where purchase is legal). The effect appeared for both sexes, but was somewhat greater among males. More important perhaps is the finding that instances of heavy drinking (having five or more drinks in a row) showed no increase at all among females during the first few years after high school, and only a very slight increase among males. Marijuana use and use of other illicit drugs showed some modest gains among males, and smaller gains among females; however, these shifts are complicated by the overall trends observed during the late seventies (and reported in this volume). A much more extensive analysis of these shifts and trends is underway in which we try to separate three different types of change (i.e., maturational, secular, and cohort-specific); for present purposes we can characterize overall levels of drug use as relatively stable during the early post-high school years.

- Even though overall levels of drug use did not change a great deal, there remained some amount of shifting among individuals—some increased their use of a particular category of drug while others decreased theirs. In general, however, drug use during the first years after high school was highly predictable from senior year drug use levels. This was most strongly the case for cigarette use, but also held true for the use of alcohol, marijuana, and other illicit drugs.

- Against the backdrop of stability described above, our analyses nevertheless revealed some moderate but important shifts in drug use linked to different post-high school experiences. Three interrelated dimensions of experience were examined: education, occupation, and living arrangements. It would have been unwise to examine any one of these dimensions in isolation, because they are so interconnected. For example, those employed in full-time jobs are unlikely also to be full-time students. As another example, recent graduates who are primarily students are less likely to be married and living with a spouse, but also less likely still to be living with parents, than those who are full-time employed. Taking such overlaps into account, our analyses revealed little direct impact of

post-high school educational and occupational experiences on drug use. On the other hand, living arrangements did seem to produce some clear, consistent, and understandable shifts in drug use, as outlined below.

- Use of alcohol, marijuana, and other illicit drugs all were influenced by post-high school living arrangements, and the effects were closely parallel. Cigarette use, on the other hand, was largely unaffected by living arrangements.

- Being married and living with a spouse appeared to reduce drug use. On the average, individuals in this category showed less use of marijuana and other illicit drugs, and fewer instances of heavy drinking, than had been the case when they were seniors.

- A small, but nonetheless important, minority of recent graduates were living with an unmarried partner of the opposite sex. When these individuals were seniors (and not then cohabiting), they were far above average in their rates of drug use; and the above average use continued after graduation. Indeed, for this group the use of marijuana and other illicit drugs became even more frequent during the post-high school years. Clearly, most cohabitation experiences are rather different from marriage when it comes to impacts on drug use.

- Many young adults continue living with parents for a while after high school (more than half of those one year beyond graduation, and more than one third of those three years beyond graduation). For those in this category, use of marijuana and other illicit drugs remained relatively constant—there were no overall changes from the levels of use reported as high school seniors. Alcohol use showed only modest increases, and there was very little increase in instances of heavy drinking.

- The rest of the high school graduates were grouped together as those in other living arrangements. This category includes people living alone or with others in apartments, dormitories, military bases, etc. As high school seniors they had reported about the same levels of drug use as were reported by those who continued living with parents and those who married soon after graduation. However, those who entered those "other living arrangements" after high school showed increases in their use of alcohol (including instances of heavy drinking), marijuana, and other illicit drugs. A number of more specific subgroups were examined,

including those living in dormitories, those on military bases, and those who reported living alone (rather than with one or more roommates); however, none of these subgroups showed a sufficiently distinct departure in trends and/or sufficient sample size to warrant separating it from the larger "other living arrangements" category.

- In sum, our examination of post-high school experiences linked to drug use revealed that use of alcohol, marijuana, and other illicit drugs are reduced among those living with a spouse, remain largely unchanged among those living with parents, and increase among those in most other living arrangements. Post-high school educational and occupational experiences show relatively little independent impact on drug use, once their statistical association with living arrangements is taken into account.

Reasons for the Changes in Frequent Marijuana Use

Charting the trends in frequent marijuana use, and bringing them to the attention of policy-makers and the public, have been among the more important functions of the present series of reports. Over the past two years, we have begun a more intensive examination of frequent marijuana users, utilizing data not only from seniors, but also from longitudinal follow-ups during the post-high school years. The fact that the senior year samples, in particular, are so large makes it possible not only to chart trends in frequent use quite accurately, but to examine the characteristics, experiences, and outcomes of a substantial number of frequent users. Last year we reported in this section on the characteristics of daily users, as well as on the amount of marijuana they use, their use of other drugs, and the stability of their use after high school. This year at two national conferences on marijuana, we reported further on the reasons young people (including frequent users) have been giving for abstaining from use of marijuana, or for quitting its use. We also reported on the problems which daily (or near-daily) marijuana users see as resulting from their use of that drug.* Some of the key findings follow:

- As is documented in the present volume, a change in availability does not seem to account for the observed decline in marijuana use, since about 90% of every

*See L. Johnston, "A review and analysis of recent changes in marijuana use by American young people," and "Frequent marijuana use: Correlates, possible effects, and reasons for using and quitting," invited papers delivered to conferences of the American Council on Marijuana on December 4, 1981 and May 4, 1981 respectively. (Both are available from the author.)

graduating class since 1975 has said they think marijuana, if they wanted some, would be "very easy" or "fairly easy" for them to get. Further, fewer of the abstainers and quitters (combined) in recent classes list price as a deterrent to their use than was true in 1977, when we first started measuring this factor. Thus, increased control of the supply of the drug does not seem to be the critical factor in recent changes in use.

- On the demand side, we have already documented that the risk of harm perceived to be associated with marijuana use—particularly regular use—has risen among seniors as a whole. Further evidence linking this change in beliefs about the drug to change in behavior can be drawn from the reasons which abstainers have been giving for their abstention from use, and the reasons quitters have been giving for quitting use.

- On a long and comprehensive list of reasons they could check as contributing to their decision not to use, those reasons for abstention most frequently chosen by non-users in the class of 1981 were concern about "possible physical damage" (72%) and concern about "possible psychological damage" (71%). More abstainers mentioned these than any moral, legal, or social constraints. And these numbers are up some from 1976, when 63% of abstainers mentioned possible physical effects and 66% mentioned possible psychological damage.

- Of even greater relevance, among the more frequent users in the class of 1981 (that is, among those who reported using forty or more times in their life) who had quit using (a total of 118 respondents), concern about possible physical and psychological effects are also frequently mentioned as reasons for quitting (by 51% and 53%, respectively). Also ranked high is their specific concern "about loss of energy or ambition" (checked by 52% of them).

- Trends in reasons for quitting, based on all respondents in each graduating class who had quit use, show that the proportion mentioning concerns about physical health jumped by a full 24% between 1976 and 1981 (from 35% to 59%), and those concerned about psychological damage also jumped 24% (from 34% to 58%). While a number of other reasons for quitting use also were mentioned with increasing frequency, these were the largest increases. There was also a jump of 17% (to 40%) in the numbers concerned about loss of energy.

- The problems experienced by current, frequent (daily) marijuana users may also tell us something about why past frequent users have quit. (They may also tell us more about why fewer people become frequent users now, given that the problems of frequent users probably became more visible to all students in the late 1970's as the number swelled.) An examination of the types of problems checked as resulting from marijuana use showed the following results for current, daily-using seniors who answered the relevant questionnaire form in either 1980 or 1981 (combined number of respondents = 414). On a checklist of fifteen potential problems, the one selected by most daily marijuana users (43%) was that it caused them to have less energy. Perhaps related to this, 37% thought it caused them to be less interested in other activities and 34% thought it hurt their performance in school and/or on the job. Some 37% thought it interfered with their ability to think clearly (though it is not clear whether they are referring to acute or longer-lasting effects), and 39% thought that their marijuana use had hurt their relationship with their parents. These are quite substantial proportions to not only be aware of, but be willing to admit having, these various problems.

Other Data on Correlates and Trends

Hundreds of correlates of drug use, without accompanying interpretation, may be found in the series of annual volumes from the study entitled Monitoring the Future: Questionnaire Responses from the Nation's High School Students.* For each year since 1975, a separate hard-bound volume presents univariate and selected bivariate distributions on all questions contained in the study. Many variables dealing explicitly with drugs—variables not discussed here—are contained in that series; and bivariate tables are provided for all questions each year distributed against an index of lifetime illicit drug involvement. A special cross-time reference index is contained in each volume to facilitate locating the same question across different years. One can thus derive trend data on some 1500 to 2000 variables for the entire sample, or for important sub-groups (based on sex, race, region, college plans, or drug involvement).

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*This series is available from the Publications Division, Institute for Social Research, The University of Michigan, Ann Arbor, Michigan 48109.

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